EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	311	(squarine or squarilium or squarylium) near15 (mixture or admixed or mixed or two or three or different)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:20
L2	410	(squarine or squarilium or squarylium) with (mixture or admixed or mixed or two or three or different)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:52
L3	412	(squarine or squarilium or squarylium) with (mixture or admixed or mixed or two or three or different or several or plural or plurality)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:20
L4	961	(squarine or squarilium or squarylium) near10 (ligand or chelate or chelating or chelation or metallized or metal or aluminum)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:51
L5	72	l3 and l4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:50
L6	2	jp-06220438-$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:51
L7	67	(squarine or squarilium or squarylium) near10 (ligand or chelate or chelating or chelation or metallized or metal or aluminum)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:51
L8	77	(squarine or squarilium or squarylium) with (assymetric$4 or unsymmetric$4 or mixture or admixed or mixed or two or three or different)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:43
L9	67	l8 and @ad<"20040211"	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:04
L10	53	l7 and @ad<"20040211"	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:04
L11	46	l10 not l9	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:04

EAST Search History

L12	2491	(ligand$1 or chelat$6 or azo) with (different)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:44
L13	736	l12 with (metal or metallized or aluminum)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:44
L14	270591	((optical or laser or information) near5 (medium or media or disk or disc))	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:45
L15	11	l14 same l13	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:45

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$%^STN;HighlightOn=  ***;HighlightOff=***  ;

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 NEWS  7  MAY 19  Derwent World Patents Index to be reloaded and enhanced
 NEWS  8  MAY 30  IPC 8 Rolled-up Core codes added to CA/CAplus and
                  USPATFULL/USPAT2
 NEWS  9  MAY 30  The F-Term thesaurus is now available in CA/CAplus
 NEWS 10  JUN 02  The first reclassification of IPC codes now complete in
                  INPADOC
 NEWS 11  JUN 26  TULSA/TULSA2 reloaded and enhanced with new search and
                  and display fields
 NEWS 12  JUN 28  Price changes in full-text patent databases EPFULL and PCTFULL
 NEWS 13  JUl 11  CHEMSAFE reloaded and enhanced
 NEWS 14  JUl 14  FSTA enhanced with Japanese patents
 NEWS 15  JUl 19  Coverage of Research Disclosure reinstated in DWPI

 NEWS EXPRESS  JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

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FILE 'HOME' ENTERED AT 14:57:22 ON 27 JUL 2006

=> file caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

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FILE COVERS 1907 - 27 Jul 2006 VOL 145 ISS 5
FILE LAST UPDATED: 26 Jul 2006 (20060726/ED)

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=> s us 2004-0202098/pn
L1 1 US 2004-0202098/PN
(US2004202098/PN)

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.41	2.62

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STRUCTURE FILE UPDATES: 26 JUL 2006 HIGHEST RN 896142-63-5
DICTIONARY FILE UPDATES: 26 JUL 2006 HIGHEST RN 896142-63-5

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experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

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=> tra rn l1
L2 TRANSFER L1 1- RN : 7 TERMS
L3 7 L2

=> d scan

L3 7 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Nickel, bis[2,4-diphenoxy-6-[[(phenylazo-.kappa.N2)[2-
(trifluoromethyl)phenyl]methyl]azo-.kappa.N1]-1,3,5-triazinato]- (9CI)
MF C58 H38 F6 N14 Ni O4
CI CCS

/ Structure 1 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 7 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Aluminum, bis[1-[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-
ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-
(4-methoxyphenyl)-3-propyl-1H-pyrazol-4-yl]cyclobutenediyliumato][1-[(5-
chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-

```
     .kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-phenyl-3-(trifluoromethyl)-
     1H-pyrazol-4-yl]cyclobutenediyliumato]- (9CI)
MF   C84 H72 Al Cl3 F3 N9 O11
CI   CCS



* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *



* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3   7 ANSWERS   REGISTRY  COPYRIGHT 2006 ACS on STN
IN   Aluminum, bis[1-[(1-butyl-5-chloro-1,3-dihydro-3,3-dimethyl-2H-indol-2-
     ylidene)methyl]-3-[1-(1,1-dimethylethyl)-5-(hydroxy-.kappa.O)-3-propyl-1H-
     pyrazol-4-yl]-2-(hydroxy-.kappa.O)-4-hydroxycyclobutenediyliumato][1-[(5-
     chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-
     .kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-3-methyl-1-phenyl-1H-pyrazol-4-
     yl]cyclobutenediyliumato]- (9CI)
MF   C84 H91 Al Cl3 N9 O9
CI   CCS



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/ Structure 2 in file .gra /


HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3   7 ANSWERS   REGISTRY  COPYRIGHT 2006 ACS on STN
IN   Aluminum, bis[1-[(1-butyl-5-chloro-1,3-dihydro-3,3-dimethyl-2H-indol-2-
     ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-
     phenyl-3-(trifluoromethyl)-1H-pyrazol-4-yl]cyclobutenediyliumato][1-[(5-
     chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-
     .kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-phenyl-3-propyl-1H-pyrazol-4-
     yl]cyclobutenediyliumato]- (9CI)
MF   C86 H73 Al Cl3 F6 N9 O9
CI   CCS



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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**


HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3   7 ANSWERS   REGISTRY  COPYRIGHT 2006 ACS on STN
IN   Aluminum, [1-[(1-butyl-5-chloro-1,3-dihydro-3,3-dimethyl-2H-indol-2-
     ylidene)methyl]-3-[1-(1,1-dimethylethyl)-5-(hydroxy-.kappa.O)-3-propyl-1H-
     pyrazol-4-yl]-2-(hydroxy-.kappa.O)-4-hydroxycyclobutenediyliumato]bis[1-
```

[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-3-methyl-1-phenyl-1H-pyrazol-4-yl]cyclobutenediyliumato]- (9CI)
MF C81 H77 Al Cl3 N9 O9
CI CCS

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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

/ Structure 3 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 7 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Aluminum, [1-[(1-butyl-5-chloro-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-phenyl-3-(trifluoromethyl)-1H-pyrazol-4-yl]cyclobutenediyliumato]bis[1-[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-phenyl-3-propyl-1H-pyrazol-4-yl]cyclobutenediyliumato]- (9CI)
MF C85 H74 Al Cl3 F3 N9 O9
CI CCS

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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 7 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Aluminum, [1-[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-(4-methoxyphenyl)-3-propyl-1H-pyrazol-4-yl]cyclobutenediyliumato]bis[1-[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-phenyl-3-(trifluoromethyl)-1H-pyrazol-4-yl]cyclobutenediyliumato]- (9CI)
MF C81 H63 Al Cl3 F6 N9 O10
CI CCS

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ALL ANSWERS HAVE BEEN SCANNED

=> s cyclobutenediyliumato and pyrazol
77 CYCLOBUTENEDIYLIUMATO

```
        356210 PYRAZOL
L4          69 CYCLOBUTENEDIYLIUMATO AND PYRAZOL

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COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      11.28      25.65

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=> s l4
L5          12 L4

=> d all 1-12

L5   ANSWER 1 OF 12  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2006:343200  CAPLUS <<LOGINID::20060727>>
DN   144:401285
ED   Entered STN:  14 Apr 2006
TI   Filter for electronic display
IN   Yamano, Junzo; Ukai, Katsumi
PA   Kyowa Hakko Chemical Co., Ltd., Japan
SO   PCT Int. Appl., 25 pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
CC   74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
     Reprographic Processes)
     Section cross-reference(s): 73
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   WO 2006038685        A1    20060413    WO 2005-JP18607        20051007
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
             LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ,
             NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG,
             SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
             YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
PRAI JP 2004-295004       A     20041007
CLASS
 PATENT NO.       CLASS  PATENT FAMILY CLASSIFICATION CODES
 --------------   -----  ----------------------------------------------
 WO 2006038685    IPCI   C09B0057-00 [I,A]; C07D0231-22 [I,A]; C07D0231-00
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[I,C*]; C09B0057-10 [I,A]; G02B0005-22 [I,A];
G09F0009-00 [I,A]
ECLA C09B057/00S
GI

/ Structure 4 in file .gra /

AB A filter for electronic displays which contains a squarylium compd./metal complex represented by the following general formula I (R1, R2 = H, alkyl, alkoxy, aralkyl, aryl, heterocyclyl; R3, R4 = H, alkyl, aralkyl, aryl, heterocyclyl; M = metal atom capable of coordinating; n = 1-4). 15 Squarylium compd./metal complexes are synthesized.
ST optical filter squarylium compd metal complex synthesis electronic display
IT Optical filters
Optical imaging devices
(squarylium compd./metal complex-contg. filter for electronic display)
IT ***882871-78-5P*** ***882871-79-6P*** ***882871-80-9P***
882871-82-1P ***882871-83-2P*** ***882871-84-3P***
882871-85-4P ***882871-86-5P*** ***882871-87-6P***
882871-88-7P ***882871-89-8P*** ***882871-90-1P***
882871-91-2P ***882871-92-3P*** ***882871-93-4P***
RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(synthesis of squarylium compd./metal complex for electronic display filter)
IT 856006-86-5P 882863-64-1P 882863-65-2P
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of squarylium compd./metal complex for electronic display filter)
IT 78-81-9, Isobutylamine 110-89-4, Piperidine, reactions 110-91-8, Morpholine, reactions 110-96-3, Diisobutylamine 142-71-2, Copper acetate 6018-89-9, Nickel acetate tetrahydrate 6046-93-1 14024-63-6, Zinc acetyl acetonate 15306-17-9, Aluminum tris(ethylacetoacetate) 24544-04-5, 2,6-Diisopropylaniline
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of squarylium compd./metal complex for electronic display filter)
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Kyowa Hakko Kemikaru Kabushiki Kaisha; WO 2005059608 A1 2005 CAPLUS
(2) Kyowa Hakko Kogyo Co Ltd; WO 0250190 A 2002 CAPLUS
(3) Kyowa Hakko Kogyo Co Ltd; EP 1334998 A1 2002 CAPLUS
(4) Kyowa Hakko Kogyo Co Ltd; US 2003187272 A1 2002 CAPLUS
(5) Ricoh Co Ltd; EP 1132902 A1 2002 CAPLUS
(6) Ricoh Co Ltd; JP 2001322356 A 2002 CAPLUS
(7) Ricoh Co Ltd; US 200144001 A1 2002
(8) Ricoh Co Ltd; JP 2002234259 A 2002 CAPLUS

L5 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:147955 CAPLUS <<LOGINID::20060727>>
DN 144:243475
ED Entered STN: 17 Feb 2006
TI Optical recording medium, it recording-readout method, and optical recording apparatus
IN Yashiro, Toru
PA Ricoh Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006048892	A2	20060216	JP 2004-326759	20041110
	WO 2006051922	A1	20060518	WO 2005-JP20764	20051107

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,

GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ,
NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG,
SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM
PRAI JP 2004-193563 A 20040630
JP 2004-326759 A 20041110

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006048892	IPCI	G11B0007-24 [I,A]; G11B0007-244 [I,A]; G11B0007-254 [I,A]; G11B0007-257 [I,A]; B41M0005-26 [I,A]
	FTERM	2H111/EA03; 2H111/EA12; 2H111/EA22; 2H111/EA32; 2H111/EA37; 2H111/FA02; 2H111/FA11; 2H111/FA12; 2H111/FA14; 2H111/FA37; 2H111/FB48; 2H111/GA03; 2H111/GA07; 5D029/JA04; 5D029/JB09; 5D029/JB13; 5D029/JB14; 5D029/JB21; 5D029/JB35; 5D029/JB47; 5D029/LA15; 5D029/LB07; 5D029/RA02; 5D029/WB17; 5D029/WC01
WO 2006051922	IPCI	G11B0007-24 [I,A]; G11B0007-244 [I,A]; G11B0007-257 [I,A]; G11B0007-254 [I,A]; B41M0005-26 [I,A]

AB The invention relates to a rewritable optical disk comprising a first optical recording layer and a second optical recording layer, wherein the second optical recording layer contains org. dyes including at least one squarylium metal chelate compd. and the org. dyes show a DTA peak width of .ltoreq.45.degree.. The protective layer of the optical disk contains ZnS.

ST optical recording medium double layer disk squarylium dye

IT Erasable optical disks
Optical memory devices
Optical recording
(optical recording medium with squarylium dye, it recording-readout method, and optical recording app.)

IT ***439591-99-8*** ***823809-64-9*** ***876407-70-4***
876407-71-5 ***876407-72-6*** ***876407-73-7***
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(optical recording medium with squarylium dye, it recording-readout method, and optical recording app.)

IT 1314-98-3, Zinc sulfide, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(protective layer; optical recording medium with squarylium dye, it recording-readout method, and optical recording app.)

L5 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:31396 CAPLUS <<LOGINID::20060727>>
DN 144:138998
ED Entered STN: 13 Jan 2006
TI Optical recording medium, recording and reproducing method thereof, and optical recording apparatus
IN Yashiro, Tohru; Nakamura, Yuki; Mikami, Tatsuo; Shimizu, Ikuo; Kinugasa, Motoharu; Toyoda, Hiroshi
PA Ricoh Company, Ltd., Japan; Kyowa Hakko Chemical Co., Ltd.
SO PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM B41M005-26
ICS G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006004172	A1	20060112	WO 2005-JP12523	20050630

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG,
NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,
SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,
ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM,
KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG,
KZ, MD, RU, TJ, TM

	JP 2006044241	A2	20060216	JP 2005-188996	20050628
PRAI	JP 2004-193576	A	20040630		
	JP 2005-188996	A	20050628		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2006004172	ICM	B41M005-26
	ICS	G11B007-24
	IPCI	B41M0005-26 [ICM,7]; G11B0007-24 [ICS,7]
JP 2006044241	IPCI	B41M0005-26 [I,A]; G11B0007-244 [I,A]; G11B0007-24 [I,A]; G11B0007-254 [I,A]; G11B0007-257 [I,A]
	FTERM	2H111/EA03; 2H111/EA12; 2H111/EA22; 2H111/EA25; 2H111/EA39; 2H111/FA02; 2H111/FA12; 2H111/FA14; 2H111/FA27; 2H111/FB48; 2H111/FB60; 5D029/JA04; 5D029/JB09; 5D029/JB13; 5D029/JB35; 5D029/JB47; 5D029/LA15; 5D029/LB07; 5D029/WB17

AB An optical recording medium contains a 1st substrate, a 1st information layer, an intermediate layer, a 2nd information layer and a 2nd substrate in this order, where the 1st information layer contains a 1st recording layer disposed on the 1st substrate and the 2nd information layer contains a reflective layer, a 2nd recording layer contg. an org. dye and a protective layer which are disposed on the 2nd substrate in this order; and the 2nd recording layer contains an org. dye which is at least one selected from the group consisting of the specified squarylium metal chelate compds. The material has improved light-resistance and can be applied for DVD.

ST optical recording medium DVD squarylium metal chelate

IT Optical ROM disks
Optical recording materials
(optical recording medium, recording and reproducing method thereof, and optical recording app.)

IT ***439591-83-0*** ***439591-91-0*** ***439592-01-5***
873447-89-3 ***873447-90-6*** ***873447-91-7***
873447-92-8

RL: NUU (Other use, unclassified); USES (Uses)
(optical recording medium, recording and reproducing method thereof, and optical recording app.)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Hitachi Maxell Ltd; JP 2003170664 A 2003 CAPLUS
(2) Pioneer Corporation; EP 1067535 A2 2001 CAPLUS
(3) Pioneer Corporation; JP 200123237 A 2001
(4) Pioneer Corporation; US 2005063295 A1 2001 CAPLUS
(5) Ricoh Company Ltd; EP 1335357 A1 2003 CAPLUS
(6) Ricoh Company Ltd; US 20030206514 A1 2003
(7) Ricoh Company Ltd; JP 2003305958 A 2003 CAPLUS

L5 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:10492 CAPLUS <<LOGINID::20060727>>
DN 144:117874
ED Entered STN: 06 Jan 2006
TI Optical recording medium with formazan metal complex to improve light stability and optical recording-readout method with 630-700 nm light
IN Tomura, Tatsuya; Sato, Tsutomu; Ueno, Yasunobu; Noguchi, Shu
PA Ricoh Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 25 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006001104	A2	20060105	JP 2004-178951	20040616
PRAI	JP 2004-178951		20040616		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006001104	IPCI	B41M0005-26 [I,A]; G11B0007-244 [I,A]; G11B0007-24 [I,A]
	FTERM	2H111/EA03; 2H111/EA22; 2H111/FB41; 2H111/FB42; 2H111/FB43; 2H111/FB48; 5D029/JA04; 5D029/JB47; 5D029/JC05; 5D029/WB11; 5D029/WB14; 5D029/WB17

GI

/ Structure 5 in file .gra /

AB The invention relates to an optical recording medium comprising a substrate, an optional undercoat layer, a recording layer, a reflection layer, a protective layer or an adhesive layer and a second substrate, wherein the recording layer contains at least one formazan metal complex represented by I (Z1, Z2 = atoms for forming 5- to 6-membered ring; Z1, z2 = alkyl, aryl, alkylcarbonyl, arylcarbonyl, alkenyl, heterocyclyl, alkoxycarbonyl; R1, R2 = F, fluoroalkyl, halo, alkyl, nitro, cyano; k1, k2 = substituent no.; X = -CH2-, -SO2-; n = 0, 1) with metal (selected from Fe, Co, Ni, Cu, Zn, and Pd). The recording layer may include a 550-630 nm light absorbing dye.

ST optical recording medium formazan metal complex light stabilizer

IT Erasable optical disks
Optical recording
Optical recording materials
(optical recording medium with formazan metal complex to improve light stability and optical recording-readout method with 630-700 nm light)

IT 312583-14-5 331980-41-7 ***846543-60-0*** 872713-89-8D, complex with Nickel 872713-90-1D, complex with chromium 872713-91-2D, complex with nickel 872713-92-3D, complex with copper 872713-93-4D, complex with Nickel 872713-94-5D, complex with nickel 872713-95-6D, complex with nickel 872713-96-7D, complex with nickel 872713-97-8D, complex with nickel 872713-98-9D, complex with cobalt 872713-99-0D, complex with zinc 872714-00-6D, complex with nickel 872714-01-7D, complex with nickel 872714-02-8D, complex with nickel 872714-03-9D, complex with nickel 872714-04-0D, complex with cobalt
RL: MOA (Modifier or additive use); USES (Uses)
(optical recording medium with formazan metal complex to improve light stability and optical recording-readout method with 630-700 nm light)

L5 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1049209 CAPLUS <<LOGINID::20060727>>
DN 143:356722
ED Entered STN: 30 Sep 2005
TI Optical recording medium for DVD disks and production method
IN Noguchi, Takashi; Sato, Tsutomu; Tomura, Tatsuya; Ueno, Yasunobu; Shimizu, Ikuo; Kinugasa, Motoharu; Toyota, Hiroshi; Ukai, Katsumi
PA Ricoh Co., Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Oil and Fat Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G11B007-24
ICS B41M005-26; G11B007-26
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005267668	A2	20050929	JP 2004-73773	20040316
PRAI	JP 2004-73773		20040316		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005267668	ICM	G11B007-24
	ICS	B41M005-26; G11B007-26
	IPCI	G11B0007-24 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-26 [ICS,7]
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]; G11B0007-26 [I,A]; G11B0007-26 [I,C*]
	FTERM	2H111/EA03; 2H111/EA22; 2H111/FA01; 2H111/FA12; 2H111/FA14; 2H111/FA23; 2H111/FB48; 5D029/HA06; 5D029/JA04; 5D029/JB21; 5D029/JB35; 5D029/JB47; 5D029/MA13; 5D029/MA15; 5D029/WB11; 5D029/WB17; 5D029/WC01; 5D121/AA01; 5D121/AA04; 5D121/AA05; 5D121/EE03; 5D121/EE22

AB The invention refers to an optical recording medium for recordable DVD systems wherein the recording medium comprises a recording layer and a reflective layer laminated in that order on a substrate, and the recording layer contains a squalirium metal chelate and/or squalirium compd., and the reflective layer contains Ag and has thickness 900 - 1700 .ANG. (90 - 170 nm). Preferably, the reflective layer should contain Cu at 0.1 - 1.5 %at.

ST optical disk recording squalirium silver DVD

IT Optical disks
(DVD; optical recording medium for DVD disks and prodn. method)

IT Optical disks
(write-once read-many; optical recording medium for DVD disks and prodn. method)

IT ***439591-89-6*** 449762-58-7 465529-88-8 639847-27-1 865852-19-3 865852-20-6 ***865876-48-8*** ***865876-49-9***
RL: DEV (Device component use); USES (Uses)
(optical recording medium for DVD disks and prodn. method)

L5 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:546192 CAPLUS <<LOGINID::20060727>>
DN 143:86769
ED Entered STN: 24 Jun 2005
TI Double sided record-once read-many optical disks
IN Minakami, Satoru
PA Ricoh Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G11B007-24
ICS B41M005-26; G11B007-007
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005166171	A2	20050623	JP 2003-404065	20031203
PRAI JP 2003-404065		20031203		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005166171	ICM	G11B007-24
	ICS	B41M005-26; G11B007-007
	IPCI	G11B0007-24 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-007 [ICS,7]
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G11B0007-007 [I,A]; G11B0007-007 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
	FTERM	2H111/EA03; 2H111/EA04; 2H111/EA12; 2H111/EA22; 2H111/EA23; 2H111/EA25; 2H111/EA31; 2H111/FA02; 2H111/FA12; 2H111/FA14; 2H111/FB05; 2H111/FB09; 2H111/FB12; 2H111/FB17; 2H111/FB21; 2H111/FB42; 5D029/JA01; 5D029/JA04; 5D029/JB10; 5D029/JB14; 5D029/JB18; 5D029/JB42; 5D029/LA11; 5D029/RA03; 5D029/RA04; 5D029/RA17; 5D029/RA46; 5D029/RA49; 5D029/WA02; 5D090/AA01; 5D090/BB03; 5D090/BB05; 5D090/BB12; 5D090/BB13; 5D090/CC12; 5D090/CC14;

5D090/DD01; 5D090/FF02; 5D090/FF11; 5D090/GG03;
5D090/HH01; 5D090/KK09

AB . The title disk has a first substrate, which is with a guide groove and consists of: a first dye-contg. record-once read-many recording layer; a first reflective layer; and an org. protective layer, an org. adhesive intermediate layer, and a second substrate which consists of: a third protective layer; Sb-Te based phase-change third recording layer; a second protective layer; a second reflective layer; an org. dye-contg. second recording layer; and a first protective layer, wherein the first and second recording layer is recorded/read out by irradiating a laser beam from the first substrate and wherein third recording layer is recorded/read out by irradiating a laser beam from the second substrate. The optical disk is manufd. without using a 2P process.

ST double sided record optical disk

IT Optical disks
(write-once read-many, double sided; double sided record-once read-many optical disks)

IT 1314-98-3, Zinc sulfide (ZnS), uses 7440-22-4, Silver, uses 7631-86-9, Silica, uses 330671-06-2, Kayarad DVD 003 660844-71-3
RL: DEV (Device component use); USES (Uses)
(double sided record-once read-many optical disks)

IT ***439591-91-0***
RL: TEM (Technical or engineered material use); USES (Uses)
(double sided record-once read-many optical disks)

L5 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:323387 CAPLUS <<LOGINID::20060727>>
DN 142:400663
ED Entered STN: 15 Apr 2005
TI Optical recording medium and its manufacture
IN Yashiro, Toru; Nakamura, Yuki; Mikami, Tatsuo
PA Ricoh Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G11B007-24
ICS B41M005-26; G11B007-26
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005100493	A2	20050414	JP 2003-329776	20030922
PRAI JP 2003-329776		20030922		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005100493	ICM	G11B007-24
	ICS	B41M005-26; G11B007-26
	IPCI	G11B0007-24 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-26 [ICS,7]
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]; G11B0007-26 [I,A]; G11B0007-26 [I,C*]
	FTERM	2H111/EA03; 2H111/EA12; 2H111/EA31; 2H111/FA02; 2H111/FA12; 2H111/FA14; 2H111/FA24; 2H111/FA27; 2H111/FA42; 5D029/JA04; 5D029/JB02; 5D029/JB05; 5D029/JC03; 5D029/KB03; 5D029/LA13; 5D029/LA15; 5D029/MA13; 5D029/RA02; 5D029/WB17; 5D029/WC01; 5D121/AA01; 5D121/AA05; 5D121/EE21

AB Title recording medium comprises the first substrate plate having , on the surface, an org. dye-contg. first recording layer and the first reflection layer and the second substrate having, on its surface, the second reflection layer, the org. dye-contg. second recording layer, and an inorg. protective layer laminated together via an org. intermediate layer. The recording medium records the information coming in from the surface of the first substrate on the first and the second recording layers and read out. The optical absorption of the second recording layer is higher than that of the first recording layer at the recording wave length.

ST optical recording medium DVD

IT Optical disks

(optical recording medium having two recording layer)
IT Polycarbonates, uses
RL: DEV (Device component use); USES (Uses)
(optical recording medium having two recording layer)
IT ***439591-71-6*** ***439591-99-8*** 465529-92-4
RL: DEV (Device component use); USES (Uses)
(optical recording medium having two recording layer)

L5 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:182949 CAPLUS <<LOGINID::20060727>>
DN 142:269320
ED Entered STN: 04 Mar 2005
TI Pigment-based write once type DVD medium recording/reproducing method and device
IN Tomura, Tatsuya; Sato, Tsutomu; Ueno, Yasunobu; Noguchi, Soh
PA Ricoh Company, Ltd., Japan
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM G11B007-0045
ICS G11B007-007; G11B007-125; G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005020217	A1	20050303	WO 2004-JP11984	20040820
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2005100579	A2	20050414	JP 2004-22112	20040129
JP 3732499	B2	20060105		
EP 1667122	A1	20060607	EP 2004-771945	20040820
R: DE, ES, FR, GB, IT, NL				
PRAI JP 2003-301467	A	20030826		
JP 2004-22112	A	20040129		
WO 2004-JP11984	W	20040820		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005020217	ICM	G11B007-0045
	ICS	G11B007-007; G11B007-125; G11B007-24
	IPCI	G11B0007-0045 [ICM,7]; G11B0007-00 [ICM,7,C*]; G11B0007-007 [ICS,7]; G11B0007-125 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	G11B0007-007 [I,A]; G11B0007-007 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
	ECLA	G11B007/007T; G11B007/24
JP 2005100579	IPCI	G11B0007-0045 [I,A]; G11B0007-00 [I,C*]; G11B0007-125 [I,A]
	IPCR	G11B0007-007 [I,A]; G11B0007-007 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
	FTERM	5D029/JA04; 5D029/LA02; 5D029/MA13; 5D029/RA30; 5D029/WA02; 5D090/AA01; 5D090/BB03; 5D090/CC01; 5D090/CC14; 5D090/DD01; 5D090/EE02; 5D090/KK04; 5D789/AA23; 5D789/BA01; 5D789/BB02; 5D789/DA01; 5D789/EC09; 5D789/HA47
EP 1667122	IPCI	G11B0007-0045 [ICM,7]; G11B0007-00 [ICM,7,C*]; G11B0007-007 [ICS,7]; G11B0007-125 [ICS,7]; G11B0007-24 [ICS,7]
	ECLA	G11B007/007T; G11B007/24

AB It is possible to provide an optical recording/reproducing method and device capable of obtaining a preferable recording waveform when

performing a high linear velocity recording to a pigment-based write once type DVD medium. The pigment-based write once type DVD medium recording/reproducing method is performed as follows. The shortest mark is recorded with a higher output pulse than the other marks onto a recording layer mainly composed of org. pigment and formed on a substrate having a wobbled guide groove. The third shortest mark and after are recorded by a single pulse light having a pulse power equal to that of the second shortest mark which has been outputted highly when the pulse rear end has been outputted highly for a predetd. period of time. When performing mark recording, a cooling pulse is irradiated to the rear end and after of the pulse of all the marks and the irradn. light intensity is maintained at 0.1 mW or below for a predetd. period of time.

ST pigment based write once DVD optical disk memory device

IT Optical memory devices
(DVD players; pigment-based write once type DVD medium recording/reproducing method and device)

IT Optical disks
(write-once read-many; pigment-based write once type DVD medium recording/reproducing method and device)

IT 680209-37-4 ***846543-60-0***
RL: DEV (Device component use); USES (Uses)
(pigment-based write once type DVD medium recording/reproducing method and device)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; WO 0323769 A1
(2) Anon; EP 1425740 A CAPLUS
(3) Anon; US 200367857 A1
(4) Anon; CN 2574170 U
(5) Pioneer Electronic Corp; WO 0323769 A1 2003
(6) Pioneer Electronic Corp; EP 1425740 A 2003 CAPLUS
(7) Pioneer Electronic Corp; US 200367857 A1 2003
(8) Pioneer Electronic Corp; JP 200385753 A 2003
(9) Pioneer Electronic Corp; CN 2574170 U 2003

L5 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:33131 CAPLUS <<LOGINID::20060727>>

DN 142:123264

ED Entered STN: 14 Jan 2005

TI Optical recording DVD medium and its fabrication

IN Yashiro, Tohru; Mikami, Tatsuo; Nakamura, Yuki

PA Ricoh Company Ltd., Japan

SO Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW

DT Patent

LA English

IC ICM G11B007-24
ICS G11B007-26

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1496509	A2	20050112	EP 2004-16277	20040709
	EP 1496509	A3	20050316		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
	JP 2005044491	A2	20050217	JP 2004-73320	20040315
	US 2005013235	A1	20050120	US 2004-887787	20040709
	CN 1577554	A	20050209	CN 2004-10063579	20040712
PRAI	JP 2003-195402	A	20030710		
	JP 2004-73320	A	20040315		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1496509	ICM	G11B007-24
	ICS	G11B007-26
	IPCI	G11B0007-24 [ICM,7]; G11B0007-26 [ICS,7]
	IPCR	G11B0007-24 [I,A]; G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-248 [I,A]; G11B0007-257 [I,A]; G11B0007-26 [N,A]; G11B0007-26 [N,C*]
	ECLA	G11B007/24S4; G11B007/244; G11B007/248; G11B007/257

JP 2005044491 IPCI G11B0007-24 [ICM,7]; G11B0007-26 [ICS,7]
IPCR G11B0007-24 [I,A]; G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-248 [I,A]; G11B0007-257 [I,A]; G11B0007-26 [N,A]; G11B0007-26 [N,C*]
FTERM 5D029/HA06; 5D029/JA04; 5D029/JB14; 5D029/JB35; 5D029/LA15; 5D029/LB07; 5D029/MA13; 5D029/RA01; 5D029/RA02; 5D029/RA04; 5D029/WB17; 5D029/WC01; 5D121/AA01; 5D121/AA07; 5D121/EE22
US 2005013235 IPCI G11B0007-24 [ICM,7]
IPCR G11B0007-24 [I,A]; G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-248 [I,A]; G11B0007-257 [I,A]; G11B0007-26 [N,A]; G11B0007-26 [N,C*]
NCL 369/275.400
ECLA G11B007/24S4; G11B007/244; G11B007/248; G11B007/257
CN 1577554 IPCI G11B0007-24 [ICM,7]; G11B0007-26 [ICS,7]
IPCR G11B0007-24 [I,A]; G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-248 [I,A]; G11B0007-257 [I,A]; G11B0007-26 [N,A]; G11B0007-26 [N,C*]

AB The present invention provides an optical recording DVD disk having two recording layers in which information can be recorded and reproduced from one side. An optical recording medium includes a first information substrate selected from one including a first substrate and a read-only first recording layer contg. a reflective film and having information pits, and one including a first substrate with guide grooves, a first recording layer contg. an org. dye, and a first reflective layer arranged in this order; and a second information substrate including a second substrate with guide grooves, a second reflective layer, a second recording layer contg. an org. dye, and an inorg. protective layer in this order. The first and second information substrates are bonded with the interposition of an optically transparent org. interlayer so that the first and second substrates each face outward, and information recorded on the first and second recording layers is reproduced by applying light from a surface of the first substrate.

ST optical recording DVDROM disk

IT Optical disks
(optical DVD recording medium)

IT 7440-22-4, Silver, uses 12659-64-2, Copper 0.5, silver 99.5 (atomic) 178255-68-0, Silicon zinc oxide sulfide (Si0.1Zn0.4O0.2S0.4) 449762-58-7 465529-92-4 478628-89-6 823809-63-8 ***823809-64-9*** 823809-65-0
RL: TEM (Technical or engineered material use); USES (Uses)
(optical DVD recording medium)

L5 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:700301 CAPLUS <<LOGINID::20060727>>
DN 141:215735
ED Entered STN: 27 Aug 2004
TI Squarylium-metal chelate compounds and optical recording media
IN Yashiro, Tohru; Ishimi, Tomomi; Mikami, Tatsuo; Shimizu, Ikuo; Kinugasa, Motoharu; Toyoda, Hiroshi
PA Ricoh Company Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Yuka Co., Ltd.
SO Eur. Pat. Appl., 33 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C09B057-00
ICS G11B007-24; B41M005-00
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1449890	A1	20040825	EP 2004-3167	20040212
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004244342	A2	20040902	JP 2003-34358	20030212
US 2004202098	A1	20041014	US 2004-776973	20040211
PRAI JP 2003-34358	A	20030212		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

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 EP 1449890       ICM    C09B057-00
                  ICS    G11B007-24; B41M005-00
                  IPCI   C09B0057-00 [ICM,7]; G11B0007-24 [ICS,7]; B41M0005-00
                         [ICS,7]
                  IPCR   C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24
                         [I,C*]; G11B0007-249 [I,A]
                  ECLA   C09B057/00S; G11B007/249
 JP 2004244342    IPCI   C07D0403-08 [ICM,7]; C07D0403-00 [ICM,7,C*];
                         B41M0005-26 [ICS,7]; C09B0023-00 [ICS,7]; C09B0057-10
                         [ICS,7]; C09B0057-00 [ICS,7,C*]; G11B0007-24 [ICS,7]
                  IPCR   C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24
                         [I,C*]; G11B0007-249 [I,A]
                  FTERM  2H111/EA03; 2H111/EA22; 2H111/EA31; 2H111/EA40;
                         2H111/FA12; 2H111/FA23; 2H111/FB41; 2H111/FB42;
                         2H111/FB48; 4C063/AA01; 4C063/BB05; 4C063/CC22;
                         4C063/DD06; 4C063/EE10; 4H056/CA01; 4H056/CC02;
                         4H056/CC08; 4H056/CE01; 4H056/CE03; 4H056/CE06;
                         4H056/DD03; 4H056/FA06; 5D029/JA04
 US 2004202098    IPCI   G11B0007-26 [ICM,7]; G11B0005-84 [ICS,7]; G11B0003-70
                         [ICS,7]; G11B0003-00 [ICS,7,C*]
                  IPCR   C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24
                         [I,C*]; G11B0007-249 [I,A]
                  NCL    369/288.000
                  ECLA   C09B057/00S; G11B007/249
OS   MARPAT 141:215735
GI


/ Structure 6 in file .gra /


AB   Squarylium-metal chelate compds. as recording materials for optical
     recording media, which have excellent recording properties, light
     resistance and storage stability.  The squarylium-metal chelate compd. is
     represented by Formulas I(M = metal atom capable of coordinating; a, b and
     c each represents a squarylium dye ligand of formula II, where a is
     different from b; and c may be the same as or different from a or b; and m
     = 0, 1), II (R1,2 = alkyl group, aralkyl group, aryl group or heterocyclic
     group, each of which may be substituted; and X = aryl group, heterocyclic
     group which may be substituted).
ST   squarylium metal chelate compd optical recording media disk
IT   Optical disks
     Optical recording materials
        (squarylium-metal chelate compds. and optical recording media)
IT   Chelates
     RL: TEM (Technical or engineered material use); USES (Uses)
        (squarylium-metal chelate compds. and optical recording media)
IT   465529-92-4
     RL: TEM (Technical or engineered material use); USES (Uses)
        (formazan metal chelate compd.; optical recording media contg.
        squarylium-metal chelate compds. and)
IT     ***744251-73-8P***      ***744251-74-9P***
     RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
     engineered material use); PREP (Preparation); USES (Uses)
        (squarylium-metal chelate compds. for optical recording media)
IT     ***744251-75-0P***      ***744251-76-1P***      ***744251-77-2P***
       ***744251-78-3P***
     RL: SPN (Synthetic preparation); TEM (Technical or engineered material
     use); PREP (Preparation); USES (Uses)
        (squarylium-metal chelate compds. for optical recording media)

L5   ANSWER 11 OF 12  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2003:818463  CAPLUS <<LOGINID::20060727>>
DN   139:324209
ED   Entered STN:  17 Oct 2003
TI   Photopolymerizable compositions containing metal complexes of squarylium
     compounds
IN   Yamaoka, Tsuguo; Shimizu, Ikuo; Toyoda, Hiroshi; Kinugasa, Motoharu;
     Ikuta, Masanori; Katagi, Kyoko
PA   Kyowa Yuka Co., Ltd., Japan
SO   PCT Int. Appl., 31 pp.
     CODEN: PIXXD2
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DT Patent
LA Japanese
IC ICM C08F002-50
ICS C09B023-04; C09B057-00; G03F007-029; C07D231-22; C07D403-08; C07D413-08; C07D417-08; C07D231-20; C07F003-00; C07F003-06; C07F005-06
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 42, 74
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003085005	A1	20031016	WO 2003-JP4254	20030403
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003236353	A1	20031020	AU 2003-236353	20030403
	EP 1493757	A1	20050105	EP 2003-745891	20030403
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	US 2005164120	A1	20050728	US 2003-508528	20030403
PRAI	JP 2002-104616	A	20020408		
	WO 2003-JP4254	W	20030403		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003085005	ICM	C08F002-50
	ICS	C09B023-04; C09B057-00; G03F007-029; C07D231-22; C07D403-08; C07D413-08; C07D417-08; C07D231-20; C07F003-00; C07F003-06; C07F005-06
	IPCI	C08F0002-50 [ICM,7]; C08F0002-46 [ICM,7,C*]; C09B0023-04 [ICS,7]; C09B0023-00 [ICS,7,C*]; C09B0057-00 [ICS,7]; G03F0007-029 [ICS,7]; C07D0231-22 [ICS,7]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*]; C07D0413-08 [ICS,7]; C07D0413-00 [ICS,7,C*]; C07D0417-08 [ICS,7]; C07D0417-00 [ICS,7,C*]; C07D0231-20 [ICS,7]; C07D0231-00 [ICS,7,C*]; C07F0003-00 [ICS,7]; C07F0003-06 [ICS,7]; C07F0005-06 [ICS,7]; C07F0005-00 [ICS,7,C*]
	IPCR	C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0403-00 [I,C*]; C07D0403-08 [I,A]; C07D0413-00 [I,C*]; C07D0413-06 [I,A]; C07D0413-08 [I,A]; C07D0417-00 [I,C*]; C07D0417-08 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
	ECLA	C07D417/08; C07D231/22; C07D261/12; C07D403/08; C07D413/06+261+209C; C07D413/08; C08F002/50; G03F007/029
AU 2003236353	IPCI	C08F0002-50 [ICM,7]; C08F0002-46 [ICM,7,C*]; C07D0413-08 [ICS,7]; C07D0413-00 [ICS,7,C*]; C07D0417-08 [ICS,7]; C07D0417-00 [ICS,7,C*]; C07D0231-20 [ICS,7]; C07F0003-00 [ICS,7]; C07F0003-06 [ICS,7]; C07F0005-06 [ICS,7]; C07F0005-00 [ICS,7,C*]; C09B0023-04 [ICS,7]; C09B0023-00 [ICS,7,C*]; C09B0057-00 [ICS,7]; G03F0007-029 [ICS,7]; C07D0231-22 [ICS,7]; C07D0231-00 [ICS,7,C*]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*]
	IPCR	C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0403-00 [I,C*]; C07D0403-08 [I,A]; C07D0413-00 [I,C*]; C07D0413-06 [I,A]; C07D0413-08 [I,A]; C07D0417-00 [I,C*]; C07D0417-08 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
EP 1493757	IPCI	C08F0002-50 [ICM,7]; C08F0002-46 [ICM,7,C*]; C09B0023-04 [ICS,7]; C09B0023-00 [ICS,7,C*]; C09B0057-00 [ICS,7]; G03F0007-029 [ICS,7]; C07D0231-22

[ICS,7]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*];
C07D0413-08 [ICS,7]; C07D0413-00 [ICS,7,C*];
C07D0417-08 [ICS,7]; C07D0417-00 [ICS,7,C*];
C07D0231-20 [ICS,7]; C07D0231-00 [ICS,7,C*];
C07F0003-00 [ICS,7]; C07F0003-06 [ICS,7]; C07F0005-06
[ICS,7]; C07F0005-00 [ICS,7,C*]
IPCR C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0403-00
[I,C*]; C07D0403-08 [I,A]; C07D0413-00 [I,C*];
C07D0413-06 [I,A]; C07D0413-08 [I,A]; C07D0417-00
[I,C*]; C07D0417-08 [I,A]; C08F0002-46 [I,C*];
C08F0002-50 [I,A]; G03F0007-029 [I,A]; G03F0007-029
[I,C*]
ECLA C07D417/08; C07D231/22; C07D261/12; C07D403/08;
C07D413/06+261+209C; C07D413/08; C08F002/50;
G03F007/029
US 2005164120 IPCI G03C0001-492 [ICM,7]; G03C0001-005 [ICM,7,C*]
NCL 430/281.100
OS MARPAT 139:324209
AB The photopolymerizable compn. comprises a metal complex of a squarylium compd., a radical generating agent and a compd. contg. .gtoreq.1 ethylenically unsatd. double bond. The photopolymerizable compn. exhibits enhanced light sensitivity, and is useful for presensitized plate, recording material for visible laser (such as dry film resist, digital proof and hologram), panchromatic sensitizing material (for example, a sensitizing material for a hologram and a sensitizing material for full color display comprising a photopolymerizable compn. included in a microcapsule), coating material, adhesive, etc.
ST photopolymerizable compn squarylium compd metal complex
IT Adhesives
Coating materials
Photoresists
(photopolymerizable compns. contg. metal complexes of squarylium compds. for presensitized plates, visible laser recording materials, coatings and adhesives)
IT Polymerization catalysts
(photopolymn.; photopolymerizable compns. contg. metal complexes of squarylium compds. for presensitized plates, visible laser recording materials, coatings and adhesives)
IT Lithographic plates
(presensitized; photopolymerizable compns. contg. metal complexes of squarylium compds. for presensitized plates, visible laser recording materials, coatings and adhesives)
IT 6542-67-2, 2,4,6-Tris(trichloromethyl)-s-triazine
RL: CAT (Catalyst use); USES (Uses)
(photopolymerizable compns. contg. metal complexes of squarylium compds. for presensitized plates, visible laser recording materials, coatings and adhesives)
IT ***439591-71-6P*** ***439591-74-9P*** ***439591-76-1P***
439591-99-8P 612830-89-4P 612830-90-7P 612830-91-8P
612830-92-9P 612830-93-0P
RL: IMF (Industrial manufacture); PREP (Preparation)
(photopolymerizable compns. contg. metal complexes of squarylium compds. for presensitized plates, visible laser recording materials, coatings and adhesives)
IT 612830-94-1P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photopolymerizable compns. contg. metal complexes of squarylium compds. for presensitized plates, visible laser recording materials, coatings and adhesives)
IT 577974-81-3P 612837-77-1P 612837-78-2P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(photopolymerizable compns. contg. metal complexes of squarylium compds. for presensitized plates, visible laser recording materials, coatings and adhesives)
IT 89-25-8, 1-Phenyl-3-methylpyrazolin-5-one 91-66-7, N,N-Diethylaniline 118-12-7, 1,3,3-Trimethyl-2-methylene indoline 557-34-6, Zinc acetate 2892-63-9, 3,4-Dichloro-3-cyclobuten-1,2-dione 3119-93-5 5222-73-1, 3,4-Dimethoxy-3-cyclobutene-1,2-dione 6872-17-9, 5-Chloro-1,3,3-trimethyl-2-methylene indoline 7727-43-7, Barium sulfate 15306-17-9, Aluminumtris(ethylacetoacetate) 23253-51-2, 5-Hydroxy-3-phenylisoxazole

29211-43-6 31272-05-6 35976-46-6, 5-Methoxy-1,3,3-trimethyl-2-methyleneindoline 612830-88-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(photopolymerizable compns. contg. metal complexes of squarylium compds. for presensitized plates, visible laser recording materials, coatings and adhesives)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Kyowa Hakko Kogyo Co Ltd; JP 08-510752 A 1996
(2) Kyowa Hakko Kogyo Co Ltd; US 5681685 A 1996 CAPLUS
(3) Kyowa Hakko Kogyo Co Ltd; EP 729945 B 1996 CAPLUS
(4) Kyowa Hakko Kogyo Co Ltd; WO 9609289 A 1996 CAPLUS
(5) Kyowa Hakko Kogyo Co Ltd; WO 0250190 A 2002 CAPLUS
(6) Kyowa Hakko Kogyo Co Ltd; AU 2002017451 A 2002 CAPLUS
(7) Leila, T; Macrochemical Journal 2000, V64(3), P247
(8) Mitsubishi Chemical Corp; JP 2000159776 A 2000 CAPLUS
(9) Ricoh Co Ltd; EP 1267338 A 2002 CAPLUS
(10) Ricoh Co Ltd; JP 2002370451 A 2002 CAPLUS
(11) Ricoh Co Ltd; JP 2002370452 A 2002 CAPLUS
(12) Ricoh Co Ltd; JP 2002370453 A 2002 CAPLUS
(13) Ricoh Co Ltd; JP 2002370454 A 2002 CAPLUS

L5 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:487670 CAPLUS <<LOGINID::20060727>>
DN 137:70548
ED Entered STN: 28 Jun 2002
TI Metal complex-type squarylium compounds and rewritable optical recording media made by using the same
IN Shimizu, Ikuo; Toyoda, Hiroshi; Kinugasa, Motoharu; Yamada, Shiho; Noguchi, Soh; Satoh, Tsutomu; Tomura, Tatsuya
PA Kyowa Hakko Kogyo Co., Ltd., Japan; Kyowa Yuka Co., Ltd.; Ricoh Company, Ltd.
SO PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM C09B023-00
ICS B41M005-26; G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002050190	A1	20020627	WO 2001-JP11116	20011219
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2400181	AA	20020627	CA 2001-2400181	20011219
	AU 2002017451	A5	20020701	AU 2002-17451	20011219
	EP 1334998	A1	20030813	EP 2001-271415	20011219
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	TW 588090	B	20040521	TW 2001-90131711	20011220
	US 2003187272	A1	20031002	US 2002-203409	20021127
	US 6660867	B2	20031209		
PRAI	JP 2000-387192	A	20001220		
	WO 2001-JP11116	W	20011219		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002050190	ICM	C09B023-00
	ICS	B41M005-26; G11B007-24
	IPCI	C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10

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                    [I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*];
                    G11B0007-24 [I,C*]; G11B0007-249 [I,A]
          ECLA      C09B057/00S; C09B057/10; G11B007/249
 CA 2400181   IPCI  C09B0023-00 [ICM,7]; G11B0007-24 [ICS,7]; B41M0005-26
                    [ICS,7]
          ECLA      C09B057/00S; C09B057/10; G11B007/249
 AU 2002017451  IPCI C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24
                    [ICS,7]
          IPCR      C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10
                    [I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*];
                    G11B0007-24 [I,C*]; G11B0007-249 [I,A]
 EP 1334998   IPCI  C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24
                    [ICS,7]
          IPCR      C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10
                    [I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*];
                    G11B0007-24 [I,C*]; G11B0007-249 [I,A]
          ECLA      C09B057/00S; C09B057/10; G11B007/249
 TW 588090    IPCI  C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24
                    [ICS,7]
 US 2003187272  IPCI G11B0007-24 [ICM,7]; C07F0005-06 [ICS,7]; C07F0005-00
                    [ICS,7,C*]
          IPCR      C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10
                    [I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*];
                    G11B0007-24 [I,C*]; G11B0007-249 [I,A]
          NCL       548/101.000
          ECLA      C09B057/00S; C09B057/10; G11B007/249
OS   MARPAT 137:70548
GI


/ Structure 7 in file .gra /


AB   The invention provides materials having spectral characteristics, light
     resistance, soly. and thermal decompn. characteristics suitable for DVD-R
     recording, more specifically, squarylium-metal complexes represented by I
     (R1,2 = alkyl, aralkyl, aryl, or heterocyclic group; Q = metal atom having
     ability to coordinate such as Al; q = 2 or A = aryl, heterocyclic group,
     or Y=CH-; Y = aryl or heterocyclic group). The max. optical absorption of
     the metal complex squarylium compd. dissolved in chloroform is 550-600 nm,
     and the mol extinction coeff. at the max absorption wavelength, log
     .epsilon., is .gtoreq.5. The information reproducing wavelength is
     600-700 nm. The rewritable optical recording medium contains a metal
     complex- or amine-based photostabilizer.
ST   metal aluminum squarylium compd rewritable optical recording medium; amine
     photostabilizer rewritable optical recording medium
IT   Optical recording materials
        (erasable; metal squarylium complex for rewritable optical recording
        medium)
IT   Onium compounds
     RL: TEM (Technical or engineered material use); USES (Uses)
        (squarylium; rewritable optical recording medium contg.)
IT   86-92-0   89-25-8   90-31-3   118-12-7, 1,3,3-Trimethyl-2-
     methyleneindoline   321-07-3   2749-59-9   4845-49-2   5222-73-1
     6872-17-9, 5-Chloro-1,3,3-trimethyl-2-methyleneindoline   13024-90-3
     20124-80-5   29211-43-6   31272-04-5   31272-05-6   35976-46-6,
     5-Methoxy-1,3,3-trimethyl-2-methyleneindoline   39578-87-5,
     1,3,3,5-Tetramethyl-2-methyleneindoline   54683-96-4   60798-11-0
     62783-93-1, 5-Bromo-1,3,3-trimethyl-2-methyleneindoline   64123-72-4
     99567-90-5   118048-80-9   118048-83-2   118049-03-9   184707-90-2
     439289-89-1   439289-90-4   439289-91-5
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (metal squarylium complex for rewritable optical recording medium)
IT     ***439591-71-6P***     ***439591-72-7P***     ***439591-73-8P***
       ***439591-74-9P***     ***439591-75-0P***     ***439591-76-1P***
       ***439591-77-2P***     ***439591-78-3P***     ***439591-79-4P***
       ***439591-80-7P***     ***439591-81-8P***     ***439591-82-9P***
       ***439591-83-0P***     ***439591-84-1P***     ***439591-85-2P***
       ***439591-86-3P***     ***439591-87-4P***     ***439591-88-5P***
       ***439591-89-6P***     ***439591-90-9P***     ***439591-91-0P***
       ***439591-92-1P***     ***439591-93-2P***     ***439591-94-3P***
       ***439591-95-4P***     ***439591-96-5P***     ***439591-97-6P***
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      ***439591-98-7P***      ***439591-99-8P***      ***439592-00-4P***
      ***439592-01-5P***      ***439592-02-6P***      ***439592-03-7P***
      ***439592-04-8P***      ***439592-05-9P***      ***439592-06-0P***
     RL: SPN (Synthetic preparation); TEM (Technical or engineered material
     use); PREP (Preparation); USES (Uses)
        (metal squarylium complex for rewritable optical recording medium)
IT   23507-22-4   87314-12-3   227190-73-0   439610-73-8
     RL: TEM (Technical or engineered material use); USES (Uses)
        (photostabilizer; rewritable optical recording medium contg.)
RE.CNT  4     THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Konica Corp; JP 2000345059 A 2000 CAPLUS
(2) Kyowa Hakko Kogyo Co Ltd; WO 0144233 A1 2001 CAPLUS
(3) Kyowa Hakko Kogyo Co Ltd; EP 1152001 A1 2001 CAPLUS
(4) Ricoh Co Ltd; JP 200123235 A 2001


=> d his

     (FILE 'HOME' ENTERED AT 14:57:22 ON 27 JUL 2006)

     FILE 'CAPLUS' ENTERED AT 14:57:35 ON 27 JUL 2006
L1            1 S US 2004-0202098/PN

     FILE 'REGISTRY' ENTERED AT 14:57:53 ON 27 JUL 2006

     FILE 'CAPLUS' ENTERED AT 14:57:58 ON 27 JUL 2006
L2              TRA L1 1- RN :         7 TERMS

     FILE 'REGISTRY' ENTERED AT 14:57:59 ON 27 JUL 2006
L3            7 SEA L2
L4           69 S CYCLOBUTENEDIYLIUMATO AND PYRAZOL

     FILE 'CAPLUS' ENTERED AT 15:00:38 ON 27 JUL 2006
L5            12 S L4

=> log y
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                     ENTRY    SESSION
FULL ESTIMATED COST                                  37.30      62.95

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)        SINCE FILE      TOTAL
                                                     ENTRY    SESSION
CA SUBSCRIBER PRICE                                  -9.00      -9.00

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 NEWS  6  MAY 11  KOREAPAT updates resume
 NEWS  7  MAY 19  Derwent World Patents Index to be reloaded and enhanced
 NEWS  8  MAY 30  IPC 8 Rolled-up Core codes added to CA/CAplus and
                  USPATFULL/USPAT2
 NEWS  9  MAY 30  The F-Term thesaurus is now available in CA/CAplus
 NEWS 10  JUN 02  The first reclassification of IPC codes now complete in
                  INPADOC
 NEWS 11  JUN 26  TULSA/TULSA2 reloaded and enhanced with new search and
                  and display fields
 NEWS 12  JUN 28  Price changes in full-text patent databases EPFULL and PCTFULL
 NEWS 13  JUl 11  CHEMSAFE reloaded and enhanced
 NEWS 14  JUl 14  FSTA enhanced with Japanese patents
 NEWS 15  JUl 19  Coverage of Research Disclosure reinstated in DWPI

 NEWS EXPRESS  JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

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                                                   ENTRY    SESSION
FULL ESTIMATED COST                                 0.21       0.21

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FILE COVERS 1907 - 27 Jul 2006 VOL 145 ISS 5
FILE LAST UPDATED: 26 Jul 2006 (20060726/ED)

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```
=> s (squarine or squaraine or squarilium or squarylium)
             8 SQUARINE
             1 SQUARINES
             9 SQUARINE
               (SQUARINE OR SQUARINES)
           464 SQUARAINE
           165 SQUARAINES
           477 SQUARAINE
               (SQUARAINE OR SQUARAINES)
            27 SQUARILIUM
             1 SQUARILIUMS
            27 SQUARILIUM
               (SQUARILIUM OR SQUARILIUMS)
           654 SQUARYLIUM
             8 SQUARYLIUMS
           654 SQUARYLIUM
               (SQUARYLIUM OR SQUARYLIUMS)
L1        1127 (SQUARINE OR SQUARAINE OR SQUARILIUM OR SQUARYLIUM)

=> s (ligand or chelat? or complex? or metal or metallized or aluminium or al)
        302880 LIGAND
        205535 LIGANDS
        412270 LIGAND
               (LIGAND OR LIGANDS)
        132306 CHELAT?
       1656239 COMPLEX?
       1662748 METAL
        840116 METALS
       2017341 METAL
               (METAL OR METALS)
          3502 METALLIZED
         11526 ALUMINIUM
            35 ALUMINIUMS
         11555 ALUMINIUM
               (ALUMINIUM OR ALUMINIUMS)
        975020 AL
          4852 ALS
        979581 AL
               (AL OR ALS)
L2     4302206 (LIGAND OR CHELAT? OR COMPLEX? OR METAL OR METALLIZED OR ALUMINI
               UM OR AL)

=> s l1 and l2
L3         232 L1 AND L2

=> s (mixed or different or complex(3a)salt) and l3
        779907 MIXED
             6 MIXEDS
        779911 MIXED
               (MIXED OR MIXEDS)
       2273157 DIFFERENT
            73 DIFFERENTS
       2273211 DIFFERENT
               (DIFFERENT OR DIFFERENTS)
       1272127 COMPLEX
        719530 COMPLEXES
       1564006 COMPLEX
```

```
                (COMPLEX OR COMPLEXES)
        770289 SALT
        596683 SALTS
       1146815 SALT
                (SALT OR SALTS)
         27620 COMPLEX(3A)SALT
L4          37 (MIXED OR DIFFERENT OR COMPLEX(3A)SALT) AND L3

=> d all 1-37

L4   ANSWER 1 OF 37  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2006:215298  CAPLUS <<LOGINID::20060727>>
DN   144:295861
ED   Entered STN:  09 Mar 2006
TI   The   ***squarylium***   compound, its   ***metal***     ***complex***  ,
     photoelectric conversion material using the   ***metal***
       ***complex***  , photoelectric converter, and the photoelectrochemical
     cell
IN   Shimizu, Ikuo; Ikuta, Masanori; Kato, Shigeaki; Oseto, Yutaka; Konno,
     Akinori
PA   Kyowa Oil and Fat Co., Ltd., Japan; Shizuoka University
SO   Jpn. Kokai Tokkyo Koho, 21 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
CC   52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     ---------------     ----   --------    --------------------    --------
PI   JP 2006063221        A2    20060309    JP 2004-248702          20040827
PRAI JP 2004-248702              20040827
CLASS
 PATENT NO.       CLASS  PATENT FAMILY CLASSIFICATION CODES
 --------------   -----  ----------------------------------------------
 JP 2006063221    IPCI   C09B0023-00 [I,A]; C07D0403-08 [I,A]; C07D0403-00
                         [I,C*]; H01M0014-00 [I,A]; H01L0031-04 [I,A]
                  FTERM  4C063/AA01; 4C063/BB05; 4C063/CC22; 4C063/DD06;
                         4C063/EE10; 4H056/CA01; 4H056/CC02; 4H056/CC08;
                         4H056/CE01; 4H056/CE03; 4H056/DD03; 4H056/FA05;
                         4H056/FA10; 5F051/AA14; 5F051/FA03; 5F051/GA03;
                         5F051/GA06; 5H032/AA06; 5H032/AS16; 5H032/EE04;
                         5H032/EE16; 5H032/EE17; 5H032/EE20; 5H032/HH01
OS   MARPAT 144:295861
GI


/ Structure 1 in file .gra /


AB   The   ***squarylium***   compd. is represented by I [R1-2 = H,
     (substituted) alkyl, (substituted) allyl, or (substituted) aralkyl group;
     when X = C the R1, R2, and adjacent C may bond together to form an
     alicyclic hydrocarbon ring or a heterocyclic ring; R3 = H, (substituted)
     alkyl, (substituted) allyl, or (substituted) aralkyl group; R4 = halo,
     -NO2, -CN, (substituted) alkyl, (substituted) allyl, or (substituted)
     aralkyl, or (substituted) alkoxyl group; n = integer 0-3; when n = 2-3,
     the 2 neighboring R4 and 2 adjacent C may bond together to form an arom.
     ring which may have substituent; X = S, , or O; when X = S or O resulting
     in the absence of R1 and R2; when X = N resulting in the absence of R2;
     R5, R6 = H, -OH, halo, -NO2, -CN, substituted) amino, (substituted) alkyl,
     (substituted) allyl, or (substituted) aralkyl, or (substituted) alkoxyl
     group; Y = N or O; when Y = O resulting in the absence of R5; A = acidic
     group; m = integer 1-4; and when n = 2-3, A's may be the same or
       ***different***   from one another].  The photoelec. conversion material
     contains a semiconductor and the above   ***squarylium***   compd.  The
     photoelectrochem. cell uses a photoelec. converter contg. the above
     photoelec. conversion material.
ST   photoelectrochem cell photoelec converter   ***squarylium***   compd
IT   Photoelectric devices
        (converters; photoelec. conversion materials contg.   ***squarylium***
       compds. for photoelec. converters in photoelectrochem. cells)
IT   Photoelectrochemical cells
```

(photoelec. conversion materials contg. ***squarylium*** compds. for photoelec. converters in photoelectrochem. cells)
IT 1335-23-5, Copper iodide 7553-56-2, Iodine, uses 10377-51-2, Lithium iodide 13463-67-7, Titania, uses 18282-10-5D, Tin oxide (SnO2), F-doped 118676-08-7, tert-Butylpyridine 218151-78-1, 1,2-Dimethyl-3-propylimidazolium iodide
RL: DEV (Device component use); USES (Uses)
(photoelec. conversion materials contg. ***squarylium*** compds. for photoelec. converters in photoelectrochem. cells)
IT 878384-25-9 878384-26-0 878384-27-1 878384-28-2 878384-29-3
RL: MOA (Modifier or additive use); USES (Uses)
(photoelec. conversion materials contg. ***squarylium*** compds. for photoelec. converters in photoelectrochem. cells)

L4 ANSWER 2 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:586773 CAPLUS <<LOGINID::20060727>>
DN 143:120052
ED Entered STN: 08 Jul 2005
TI Hair dye composition containing a fluorindine compound and a coloring composition
IN Lagrange, Alain
PA L'oreal, Fr.
SO Fr. Demande, 48 pp.
CODEN: FRXXBL
DT Patent
LA French
IC ICM A61K007-13
CC 62-3 (Essential Oils and Cosmetics)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2864782	A1	20050708	FR 2004-50041	20040107
	EP 1552813	A1	20050713	EP 2005-290033	20050106
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
	JP 2005213497	A2	20050811	JP 2005-2556	20050107
	US 2005188475	A1	20050901	US 2005-30170	20050107
PRAI	FR 2004-50041	A	20040107		
	US 2004-549534P	P	20040304		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
FR 2864782	ICM	A61K007-13
	IPCI	A61K0007-13 [ICM,7]
	IPCR	A61K0008-30 [I,C*]; A61K0008-49 [I,A]; A61Q0005-10 [I,A]; A61Q0005-10 [I,C*]
	ECLA	A61K008/49F; A61Q005/10
EP 1552813	IPCI	A61K0007-13 [ICM,7]
	IPCR	A61K0008-30 [I,C*]; A61K0008-49 [I,A]; A61Q0005-10 [I,A]; A61Q0005-10 [I,C*]
	ECLA	A61K008/49F; A61Q005/10
JP 2005213497	IPCI	C09B0017-06 [ICM,7]; C09B0017-00 [ICM,7,C*]; A61K0007-00 [ICS,7]; A61K0007-13 [ICS,7]; C07D0487-04 [ICS,7]; C07D0487-00 [ICS,7,C*]; D06P0003-08 [ICS,7]; D06P0003-04 [ICS,7,C*]
	IPCR	A61K0008-30 [I,C*]; A61K0008-49 [I,A]; A61Q0005-10 [I,A]; A61Q0005-10 [I,C*]
	FTERM	4C050/AA01; 4C050/AA08; 4C050/BB08; 4C050/CC08; 4C050/EE04; 4C050/FF01; 4C050/GG01; 4C050/HH01; 4C083/AA112; 4C083/AB012; 4C083/AB352; 4C083/AC082; 4C083/AC102; 4C083/AC122; 4C083/AC152; 4C083/AC172; 4C083/AC242; 4C083/AC472; 4C083/AC491; 4C083/AC522; 4C083/AC532; 4C083/AC542; 4C083/AC642; 4C083/AC692; 4C083/AC841; 4C083/AC851; 4C083/AC861; 4C083/AD042; 4C083/AD212; 4C083/AD282; 4C083/BB04; 4C083/BB05; 4C083/BB06; 4C083/BB07; 4C083/BB32; 4C083/BB33; 4C083/BB34; 4C083/BB35; 4C083/EE26; 4H057/AA02; 4H057/BA01; 4H057/BA09; 4H057/CA07; 4H057/CB45; 4H057/CB46; 4H057/DA01; 4H057/DA21
US 2005188475	IPCI	A61K0007-13 [ICM,7]
	IPCR	A61K0008-30 [I,C*]; A61K0008-49 [I,A]; A61Q0005-10

[I,A]; A61Q0005-10 [I,C*]
NCL 008/405.000
ECLA A61K008/49F; A61Q005/10
OS MARPAT 143:120052
GI

/ Structure 2 in file .gra /

AB A hair dye compn. contains a direct dye I in which :R1, R2, R3, are identical or ***different*** and represent a linear or branched C1-2 radical or a arylalkyl or aryl radical; R4, R5, are identical or ***different*** and represent a hydrogen atom, a halogen, an alkyl, and an alkoxy; n, m = 0-4. A hair dye prepd. contained 7,14-bis-(2-hydroxyethyl)-5-methyl-7,14-dihydro-quinoxalino[2,3-b]phenazine-5-ium chloride (10-3 mol) benzyl alc. 4.0, polyethylene glycol (60 EO) 6.0, hydroxyethyl cellulose 0.7, 60% alkylpolyglucoside 4.5, phosphate buffer q.s. pH = 7, and water q.s. 100 g. The compn. gives a blue tone to the hair.
ST hair dye fluorindine compd coloring
IT Surfactants
(amphoteric; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Surfactants
(anionic; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Azines
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(bis-; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Surfactants
(cationic; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Unsaturated compounds
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(cyanines; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Flavones
Hydrazones
Lactones
Polyenes
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(derivs.; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Dyes
(direct; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Hair preparations
(dyes; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Azo dyes
Oxidizing agents
(hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Nitro compounds
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Azines
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Bromates
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Carotenes, biological studies
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Enzymes, biological studies
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Peroxysulfates
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Porphyrins

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Ketones, biological studies
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hydroxy; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Surfactants
(ionic; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Functional groups
(methylidyne group; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Surfactants
(nonionic; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Salts, biological studies
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(of peroxyacids; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Dyes
(oxazines; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Group IIIA element compounds
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(perborates; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT Dyes
(thiazines; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT 11084-05-2D, Oxazine, derivs.
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(di-; hair dye compn. contg. fluorindine compd. and coloring compn.)
IT 51-17-2D, Benzimidazole, derivs. 62-53-3D, Aniline, carboxanilide derivs. 74-82-8D, Methane, triaryl derivs. 81-77-6D, Indanthrone, derivs. 81-83-4D, Naphthalimide, derivs. 82-05-3D, Benzanthrone, derivs. 83-08-9D, Quinophthalone, derivs. 84-65-1D, Anthraquinone, derivs. 90-44-8D, Anthrone, ptrimido-fused derivs. 91-22-5D, Quinoline, derivs. 91-64-5D, Coumarin, derivs. 92-32-0D, Pyronine, derivs. 92-82-0D, Phenazine, derivs. 92-83-1D, Xanthene, derivs. 92-84-2D, Phenothiazine, derivs. 95-16-9D, Benzothiazole, derivs. 95-70-5 101-81-5D, Diphenylmethane, derivs. 106-50-3, 1,4-Diaminobenzene, biological studies 106-51-4D, 2,5-Cyclohexadiene-1,4-dione, derivs. 109-97-7D, Pyrrole, diketo pyrrolo derivs. 122-39-4D, Diphenylamine, derivs. 123-30-8, p-Aminophenol 128-64-3D, Isoviolanthrone, derivs. 128-70-1D, Pyranthrone, derivs. 129-56-6D, Pyrazolanthrone, derivs. 130-00-7D, Naphtholactam, derivs. 130-15-4D, 1,4-Naphthalenedione, derivs. 198-55-0D, Perylene, derivs. 254-04-6D, Benzopyran, derivs. 260-94-6D, Acridine, derivs. 273-53-0D, Benzoxazole, derivs. 289-95-2D, Pyrimidine, anthra derivs. 475-71-8D, Flavanthrone, derivs. 480-91-1D, Isoindolinone, derivs. 482-89-3D, Indigo, derivs. 496-12-8D, Isoindoline, bis derivs. 496-12-8D, Isoindoline, derivs. 500-85-6D, Indophenol, derivs. 504-65-4D, Formazan, derivs. 514-73-8D, Dithiazine, derivs. 522-75-8D, Thioindigo, derivs. 537-65-5D, Indamine, derivs. 574-93-6D, Phthalocyanine, derivs. 578-95-0D, Acridone, derivs. 588-59-0D, Stilbene, derivs. 1047-16-1D, Quinacridone, derivs. 2053-29-4D, Azomethine, derivs. 2412-14-8D, Thiopyronine, derivs. 2835-95-2, 5-Amino-2-methylphenol 6245-87-0D, Indoaniline, derivs. 7722-84-1, Hydrogen peroxide, biological studies 11120-54-0D, Oxadiazole, derivs. 13408-62-3D, Ferricyanide, alkali ***metal*** salts 27988-97-2D, Tetrazole, quaternized derivs. 39455-90-8D, Pyrazolone, derivs. 43135-91-7D, Benzimidazolone, derivs. 55302-96-0, 5-N-(.beta.-Hydroxyethyl)amino-2-methylphenol 78675-98-6D, ***Squaraine*** , derivs. 97705-96-9D, Naphthanilide, derivs. 111076-33-6D, Fluorindine, derivs. 112772-03-9D, Benzindole, derivs. 226225-88-3 857470-17-8
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Henkel Kgaa; WO 9920233 A 1999 CAPLUS
(2) Srinivasa, R; US 6193912 B1 2001 CAPLUS
(3) Straley, J; US 3390948 A 1968 CAPLUS

L4 ANSWER 3 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:905190 CAPLUS <<LOGINID::20060727>>
DN 141:368452
ED Entered STN: 29 Oct 2004
TI Tandem solar photovoltaic cell stacks
IN Gui, John Yupend; Steigerwald, Robert Louis; Castleberry, Donald Earl
PA General Electric Company, USA
SO U.S. Pat. Appl. Publ., 20 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM H01L031-00
INCL 136244000; 136249000; 136255000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 76
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004211458	A1	20041028	US 2003-424276	20030428

PRAI US 2003-424276 20030428
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004211458	ICM	H01L031-00
	INCL	136244000; 136249000; 136255000
	IPCI	H01L0031-00 [ICM,7]
	IPCR	H01L0031-00 [I,A]; H01L0031-00 [I,C*]
	NCL	136/244.000

AB A photovoltaic device comprises a plurality of PV cell modules arranged in tandem. Each of the plurality of the tandem PV cell modules comprises at least a PV cell that comprises a pair of electrodes, at least one of which is substantially transparent to the light received by the PV device; an electron donor material, which is a photoactivatable material; and an electron acceptor material. The electron donor material of each of the plurality of the tandem PV cell modules is capable of absorbing a ***different*** portion of the spectrum of light received by the PV device.
ST solar photovoltaic tandem cell stack; photoelectrochem tandem cell stack
IT Vapor deposition process
(chem.; tandem solar photovoltaic cell stacks)
IT Porphyrins
Quinones
RL: MOA (Modifier or additive use); USES (Uses)
(dyes, photoactivatable; tandem solar photovoltaic cell stacks)
IT Azo dyes
Cyanine dyes
Dyes
(photoactivatable; tandem solar photovoltaic cell stacks)
IT Vapor deposition process
(plasma; tandem solar photovoltaic cell stacks)
IT Imines
RL: MOA (Modifier or additive use); USES (Uses)
(quinone, dyes, photoactivatable; tandem solar photovoltaic cell stacks)
IT Dyes
(***squarylium*** , photoactivatable; tandem solar photovoltaic cell stacks)
IT Glass substrates
Photoelectrochemical cells
Sputtering
Tandem solar cells
(tandem solar photovoltaic cell stacks)
IT Polysilanes
Transition ***metal*** oxides
RL: DEV (Device component use); USES (Uses)
(tandem solar photovoltaic cell stacks)
IT Ionomers
RL: MOA (Modifier or additive use); USES (Uses)
(tandem solar photovoltaic cell stacks)
IT Polymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(transparent, substrate; tandem solar photovoltaic cell stacks)

IT Dyes
(xanthene, photoactivatable; tandem solar photovoltaic cell stacks)
IT 198-55-0, Perylene 519-73-3, Triphenylmethane 574-93-6, Phthalocyanine 1047-16-1, Quinacridone 23627-89-6, Naphthalocyanine 68651-46-7, Indigo
RL: MOA (Modifier or additive use); USES (Uses)
(dyes, photoactivatable; tandem solar photovoltaic cell stacks)
IT 207347-46-4, N719 Dye
RL: MOA (Modifier or additive use); USES (Uses)
(photoactivatable; tandem solar photovoltaic cell stacks)
IT 631-40-3, Tetrapropylammonium iodide 1312-43-2, Indium oxide 1312-81-8, Lanthanum oxide 1313-99-1, Nickel oxide, uses 1314-11-0, Strontium oxide, uses 1314-13-2, Zinc oxide, uses 1314-23-4, Zirconium oxide, uses 1314-35-8, Tungsten oxide, uses 1314-36-9, Yttrium oxide, uses 1327-33-9, Antimony oxide 1332-29-2, Tin oxide 1332-37-2, Iron oxide, uses 7429-90-5, Aluminum, uses 7440-02-0, Nickel, uses 7440-06-4, Platinum, uses 7440-22-4, Silver, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses 7553-56-2, Iodine, uses 9033-83-4, Poly(phenylene) 11098-99-0, Molybdenum oxide 11099-11-9, Vanadium oxide 11118-57-3, Chromium oxide 12055-23-1, Hafnium oxide 12597-69-2, Steel, uses 12627-00-8, Niobium oxide 13463-67-7, Titanium oxide, uses 20461-54-5, Iodide, uses 20667-12-3, Silver oxide 25233-34-5, Polythiophene 32028-95-8, Polysilane 50926-11-9, Ito 59763-75-6, Tantalum oxide 66280-99-7, Poly(thienylene vinylene) 81220-16-8, Du Pont 7713 91201-85-3, PolyisoThianaphthene 96638-49-2, Polyphenylenevinylene 117944-65-7, Indium zinc oxide 118676-08-7, tert-Butylpyridine 150477-54-6, Indium tin zinc oxide
RL: DEV (Device component use); USES (Uses)
(tandem solar photovoltaic cell stacks)
IT 9078-96-0, Surlyn
RL: MOA (Modifier or additive use); USES (Uses)
(tandem solar photovoltaic cell stacks)

L4 ANSWER 4 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:700301 CAPLUS <<LOGINID::20060727>>
DN 141:215735
ED Entered STN: 27 Aug 2004
TI ***Squarylium*** - ***metal*** ***chelate*** compounds and optical recording media
IN Yashiro, Tohru; Ishimi, Tomomi; Mikami, Tatsuo; Shimizu, Ikuo; Kinugasa, Motoharu; Toyoda, Hiroshi
PA Ricoh Company Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Yuka Co., Ltd.
SO Eur. Pat. Appl., 33 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C09B057-00
ICS G11B007-24; B41M005-00
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1449890	A1	20040825	EP 2004-3167	20040212
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004244342	A2	20040902	JP 2003-34358	20030212
US 2004202098	A1	20041014	US 2004-776973	20040211
PRAI JP 2003-34358	A	20030212		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1449890	ICM	C09B057-00
	ICS	G11B007-24; B41M005-00
	IPCI	C09B0057-00 [ICM,7]; G11B0007-24 [ICS,7]; B41M0005-00 [ICS,7]
	IPCR	C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
	ECLA	C09B057/00S; G11B007/249
JP 2004244342	IPCI	C07D0403-08 [ICM,7]; C07D0403-00 [ICM,7,C*]; B41M0005-26 [ICS,7]; C09B0023-00 [ICS,7]; C09B0057-10

[ICS,7]; C09B0057-00 [ICS,7,C*]; G11B0007-24 [ICS,7]
IPCR C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
FTERM 2H111/EA03; 2H111/EA22; 2H111/EA31; 2H111/EA40; 2H111/FA12; 2H111/FA23; 2H111/FB41; 2H111/FB42; 2H111/FB48; 4C063/AA01; 4C063/BB05; 4C063/CC22; 4C063/DD06; 4C063/EE10; 4H056/CA01; 4H056/CC02; 4H056/CC08; 4H056/CE01; 4H056/CE03; 4H056/CE06; 4H056/DD03; 4H056/FA06; 5D029/JA04
US 2004202098 IPCI G11B0007-26 [ICM,7]; G11B0005-84 [ICS,7]; G11B0003-70 [ICS,7]; G11B0003-00 [ICS,7,C*]
IPCR C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
NCL 369/288.000
ECLA C09B057/00S; G11B007/249
OS MARPAT 141:215735
GI

/ Structure 3 in file .gra /

AB ***Squarylium*** - ***metal*** ***chelate*** compds. as recording materials for optical recording media, which have excellent recording properties, light resistance and storage stability. The ***squarylium*** - ***metal*** ***chelate*** compd. is represented by Formulas I(M = ***metal*** atom capable of coordinating; a, b and c each represents a ***squarylium*** dye ***ligand*** of formula II, where a is ***different*** from b; and c may be the same as or ***different*** from a or b; and m = 0, 1), II (R1,2 = alkyl group, aralkyl group, aryl group or heterocyclic group, each of which may be substituted; and X = aryl group, heterocyclic group which may be substituted).

ST ***squarylium*** ***metal*** ***chelate*** compd optical recording media disk

IT Optical disks
Optical recording materials
(***squarylium*** - ***metal*** ***chelate*** compds. and optical recording media)

IT ***Chelates***
RL: TEM (Technical or engineered material use); USES (Uses)
(***squarylium*** - ***metal*** ***chelate*** compds. and optical recording media)

IT 465529-92-4
RL: TEM (Technical or engineered material use); USES (Uses)
(formazan ***metal*** ***chelate*** compd.; optical recording media contg. ***squarylium*** - ***metal*** ***chelate*** compds. and)

IT 744251-73-8P 744251-74-9P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(***squarylium*** - ***metal*** ***chelate*** compds. for optical recording media)

IT 744251-75-0P 744251-76-1P 744251-77-2P 744251-78-3P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(***squarylium*** - ***metal*** ***chelate*** compds. for optical recording media)

L4 ANSWER 5 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:433927 CAPLUS <<LOGINID::20060727>>
DN 140:426122
ED Entered STN: 28 May 2004
TI Photovoltaic devices fabricated by growth from porous template
IN Sager, Brian; Roscheisen, Martin; Petritsch, Klaus; Pichler, Karl; Fidanza, Jacqueline; Yu, Dong
PA Nanosolar, Inc., USA
SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DT Patent

LA English
IC ICM H01L
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38, 76
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004044948	A2	20040527	WO 2003-US19173	20030617
	WO 2004044948	A3	20041111		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2004084080	A1	20040506	US 2002-290119	20021105
	US 2004250848	A1	20041216	US 2002-319406	20021211
	US 6852920	B2	20050208		
	WO 2004001926	A2	20031231	WO 2003-US19604	20030617
	WO 2004001926	A3	20040429		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003253672	A1	20040106	AU 2003-253672	20030617
	AU 2003301934	A1	20040603	AU 2003-301934	20030617
PRAI	US 2002-390904P	P	20020622		
	US 2002-290119	A	20021105		
	US 2002-303665	A	20021122		
	US 2002-319406	A	20021211		
	US 2003-443546	A	20030522		
	WO 2003-US19173	W	20030617		
	WO 2003-US19604	W	20030617		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004044948	ICM	H01L
	IPCI	H01L [ICM,7]
	IPCR	H01L [I,S]; H01L0031-00 [I,A]; H01L0031-00 [I,C*]; H01L0031-0256 [I,A]; H01L0031-0256 [I,C*]; H01L0031-042 [I,A]; H01L0031-042 [I,C*]; H01L0031-18 [I,A]; H01L0031-18 [I,C*]
US 2004084080	IPCI	H01L0031-00 [ICM,7]
	IPCR	G02B [I,S]; H01L0031-00 [I,A]; H01L0031-00 [I,C*]; H01L0031-0248 [I,C*]; H01L0031-0352 [I,A]; H01L0031-04 [I,A]; H01L0031-04 [I,C*]; H01L0031-042 [I,A]; H01L0031-042 [I,C*]; H01L0031-18 [I,A]; H01L0031-18 [I,C*]
	NCL	136/263.000
	ECLA	H01L051/20C4B
US 2004250848	IPCI	H01L0031-00 [ICM,7]
	IPCR	C08G0075-00 [I,C*]; C08G0075-12 [I,A]; C08L0065-00 [I,A]; C08L0065-00 [I,C*]; H01L0021-00 [I,A]; H01L0021-00 [I,C*]; H01L0031-00 [I,A]; H01L0031-00 [I,C*]; H01L0031-0248 [I,C*]; H01L0031-0256 [I,A]; H01L0031-0256 [I,C*]; H01L0031-0352 [I,A]; H01L0031-042 [I,A]; H01L0031-042 [I,C*]; H01L0031-06 [I,A]; H01L0031-06 [I,C*]; H01L0035-12 [I,C*]; H01L0035-24 [I,A]; H01L0051-00 [I,A]; H01L0051-00 [I,C*]; H01L0051-05 [I,C*]; H01L0051-30 [I,A]; H02J [I,S]
	NCL	136/252.000
WO 2004001926	IPCI	H01L0031-00 [ICM,7]; H01L0035-24 [ICS,7]; H01L0035-12

[ICS,7,C*]; H01L0051-00 [ICS,7]; H01L0031-06 [ICS,7]; H01L0021-00 [ICS,7]

IPCR C08G0075-00 [I,C*]; C08G0075-12 [I,A]; C08L0065-00 [I,A]; C08L0065-00 [I,C*]; H01L0021-00 [I,A]; H01L0021-00 [I,C*]; H01L0031-00 [I,A]; H01L0031-00 [I,C*]; H01L0031-0248 [I,C*]; H01L0031-0256 [I,A]; H01L0031-0256 [I,C*]; H01L0031-0352 [I,A]; H01L0031-042 [I,A]; H01L0031-042 [I,C*]; H01L0031-06 [I,A]; H01L0031-06 [I,C*]; H01L0035-12 [I,C*]; H01L0035-24 [I,A]; H01L0051-00 [I,A]; H01L0051-00 [I,C*]; H01L0051-05 [I,C*]; H01L0051-30 [I,A]; H02J [I,S]

AU 2003253672 IPCI H01L0031-00 [ICM,7]; H01L0031-06 [ICS,7]; H01L0051-00 [ICS,7]; H01L0035-24 [ICS,7]; H01L0035-12 [ICS,7,C*]; H01L0021-00 [ICS,7]

IPCR C08G0075-00 [I,C*]; C08G0075-12 [I,A]; C08L0065-00 [I,A]; C08L0065-00 [I,C*]; H01L0021-00 [I,A]; H01L0021-00 [I,C*]; H01L0031-00 [I,A]; H01L0031-00 [I,C*]; H01L0031-0248 [I,C*]; H01L0031-0256 [I,A]; H01L0031-0256 [I,C*]; H01L0031-0352 [I,A]; H01L0031-042 [I,A]; H01L0031-042 [I,C*]; H01L0031-06 [I,A]; H01L0031-06 [I,C*]; H01L0035-12 [I,C*]; H01L0035-24 [I,A]; H01L0051-00 [I,A]; H01L0051-00 [I,C*]; H01L0051-05 [I,C*]; H01L0051-30 [I,A]; H02J [I,S]

AU 2003301934 IPCI H01L0031-00 [ICM,7]

IPCR H01L [I,S]; H01L0031-00 [I,A]; H01L0031-00 [I,C*]; H01L0031-0256 [I,A]; H01L0031-0256 [I,C*]; H01L0031-042 [I,A]; H01L0031-042 [I,C*]; H01L0031-18 [I,A]; H01L0031-18 [I,C*]

AB Photovoltaic devices, such as solar cells, and methods for their manuf. are disclosed. A device may be characterized by an architecture where two more materials having ***different*** electron affinities are regularly arrayed such that their presence alternates within distances of between about 1 nm and about 100 nm. The materials are present in a matrix based on a porous template with an array of template pores. The porous template is formed by anodizing a layer of ***metal*** . A photovoltaic device may include such a porous template disposed between a base electrode and a transparent conducting electrode. A first charge-transfer material fills the template pores, A second (complementary) charge-transfer material fills addnl. space not occupied by the first charge-transfer material.

ST solar photovoltaic device fabrication growth porous template

IT Nanotubes
(carbon; photovoltaic devices fabricated by growth from porous template)

IT Liquid crystals
(discotic; photovoltaic devices fabricated by growth from porous template)

IT Fullerenes
RL: DEV (Device component use); USES (Uses)
(doped; photovoltaic devices fabricated by growth from porous template)

IT Transparent films
(elec. conductive, oxides; photovoltaic devices fabricated by growth from porous template)

IT Electric conductors
(films, transparent, oxides; photovoltaic devices fabricated by growth from porous template)

IT Anodization
Cyanine dyes
Dyes
Nanostructures
Pigments, nonbiological
Solar cells
(photovoltaic devices fabricated by growth from porous template)

IT Oligomers
Polymers, uses
Polysilanes
RL: DEV (Device component use); USES (Uses)
(photovoltaic devices fabricated by growth from porous template)

IT Fullerenes
RL: DEV (Device component use); USES (Uses)
(polymers; photovoltaic devices fabricated by growth from porous template)

IT Templates
(porous; photovoltaic devices fabricated by growth from porous template)
IT 18282-10-5, Tin dioxide
RL: DEV (Device component use); USES (Uses)
(F-doped; photovoltaic devices fabricated by growth from porous template)
IT 7782-41-4, Fluorine, uses
RL: MOA (Modifier or additive use); USES (Uses)
(SnO2 doped with; photovoltaic devices fabricated by growth from porous template)
IT 99685-96-8, Fullerene-C60
RL: DEV (Device component use); USES (Uses)
(doped; photovoltaic devices fabricated by growth from porous template)
IT 1313-99-1, Nickel oxide, uses 7440-02-0, Nickel, uses 7440-57-5, Gold, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(layer; photovoltaic devices fabricated by growth from porous template)
IT 7440-44-0, Carbon, uses
RL: DEV (Device component use); USES (Uses)
(nanotubes; photovoltaic devices fabricated by growth from porous template)
IT 7429-90-5, Aluminum, processes 7440-32-6, Titanium, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(photovoltaic devices fabricated by growth from porous template)
IT 110-01-0, Tetrahydrothiophene 198-55-0, Perylene 574-93-6, Phthalocyanine 7440-18-8D, Ruthenium, dyes, ***complexes*** 9033-83-4, Polyphenylene 23627-89-6, Naphthalocyanine 25233-34-5, Polythiophene 26009-24-5, Poly(p-phenylenevinylene) 66280-99-7, Poly(thienylenevinylene) 78675-98-6, ***Squaraine*** 91201-85-3, Poly(isothianaphthene) 95270-88-5, Polyfluorene 96638-49-2, Poly(phenylene vinylene) 104934-50-1, Poly(3-hexylthiophene) 110134-47-9, Poly(3-hexylthiophene-2,5-diyl) 110590-81-3, 2,9-Di(pent-3-yl)-anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-1,3,8,10-tetrone 110590-84-6, 2,9-Bis(1-hexyl-hept-1-yl)anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-1,3,8,10-tetrone 126213-51-2, Pedot 137191-58-3, Poly(3-octylthiophene-2,5-diyl) 138184-36-8
RL: DEV (Device component use); USES (Uses)
(photovoltaic devices fabricated by growth from porous template)
IT 1312-43-2, Indium oxide 1312-81-8, Lanthanum oxide 1314-11-0, Strontium oxide, uses 1314-13-2, Zinc oxide, uses 1314-23-4, Zirconium oxide, uses 1314-35-8, Tungsten oxide, uses 1332-29-2, Tin oxide 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 11098-99-0, Molybdenum oxide 11099-11-9, Vanadium oxide 12049-50-2, Calcium titanium oxide 12627-00-8, Niobium oxide 13463-67-7, Titania, uses 50926-11-9, Ito
RL: TEM (Technical or engineered material use); USES (Uses)
(template; photovoltaic devices fabricated by growth from porous template)

L4 ANSWER 6 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:344227 CAPLUS <<LOGINID::20060727>>
DN 141:81260
ED Entered STN: 28 Apr 2004
TI A Controlled Supramolecular Approach toward Cation-Specific Chemosensors: Alkaline Earth ***Metal*** Ion-Driven Exciton Signaling in ***Squaraine*** Tethered Podands
AU Arunkumar, Easwaran; Chithra, Parayali; Ajayaghosh, Ayyappanpillai
CS Photosciences and Photonics Division, Regional Research Laboratory (CSIR), Trivandrum, 695019, India
SO Journal of the American Chemical Society (2004), 126(21), 6590-6598
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
CC 79-3 (Inorganic Analytical Chemistry)
AB Three ***different*** ***squaraine*** tethered bichromophoric podands 3a-c with one, two, and three oxygen atoms in the podand chain and an analogous monochromophore 4a were synthesized and characterized. Among these, the bichromophores 3a-c showed high selectivity toward alk. earth ***metal*** cations, particularly to Mg2+ and Ca2+ ions, whereas they

were optically silent toward alkali ***metal*** ions. From the absorption and emission changes as well as from the Job plots, Mg2+ ions form 1:1 folded ***complexes*** with 3a and 3b whereas Ca2+ ions prefer to form 1:2 sandwich dimers. However, 3c invariably forms weak 1:1 ***complexes*** with Mg2+, Ca2+, and Sr2+ ions. The signal output in all of these cases was achieved by the formation of a sharp blue-shifted absorption and strong quenching of the emission of 3a-c. The signal transduction is achieved by the exciton interaction of the face-to-face stacked ***squaraine*** chromophores of the cation ***complex*** , which is a novel approach of specific cation sensing. The obsd. cation-induced changes in the optical properties are analogous to those of the H aggregates of ***squaraine*** dyes. A monochromophore 4a despite its binding, as evident from 1H NMR studies, remained optically silent toward Mg2+ and Ca2+ ions. While the behavior of 4a toward Mg2+ ion is understood, its optical silence toward Ca2+ ion is rationalized to the preferential formation of a Head-Tail-Tail-Head arrangement in which exciton coupling is not possible. The present study is ***different*** from other known reports on chemosensors in the sense that cation-specific supramol. host-guest ***complexation*** was exploited for controlling chromophore interaction via cation-steered exciton coupling as the mode of signaling.

ST controlled supramol cation chemosensor; alk earth ***metal*** ion exciton signaling ***squaraine*** tethered podand

IT Absorption spectra
Emission spectra
Fluorescence quenching
(controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)

IT Podands
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)

IT Alkaline earth ***metals***
RL: ANT (Analyte); ANST (Analytical study)
(ions; controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)

IT 7439-95-4, Magnesium, analysis 7440-24-6, Strontium, analysis 7440-39-3, Barium, analysis 7440-70-2, Calcium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)

IT 710293-39-3P 710293-40-6P 710293-41-7P 710293-42-8P
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)

IT 710293-47-3 710293-49-5
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)

IT 710293-43-9P 710293-45-1P
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)

IT 93-90-3P, 2-(Methylphenylamino)ethanol 7025-94-7P 84877-52-1P 107885-39-2P, 3-N,N-(Dimethylamino)phenyl-4-hydroxy-cyclobut-3-ene-1,2-dione 126739-49-9P 155172-87-5P, 3-N,N-(Dibutylamino)phenyl-4-hydroxy-cyclobut-3-ene-1,2-dione 362479-27-4P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)

IT 100-61-8, N-Methylaniline, reactions 121-69-7, N,N-Dimethylaniline,

reactions 613-29-6, N,N-Dibutylaniline 2892-51-5, Squaric acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)

IT 2892-63-9P, Squaryl dichloride 107885-40-5P, 3-Chloro-4-(4'-dimethylaminophenyl)-3-cyclobutene-1,2-dione 155172-86-4P, 3-Chloro-4-(4'-dibutylaminophenyl)-3-cyclobutene-1,2-dione
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)

RE.CNT 116 THERE ARE 116 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L4 ANSWER 7 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:60466 CAPLUS <<LOGINID::20060727>>
DN 140:136162
ED Entered STN: 26 Jan 2004
TI ***Squarylium*** compound and its ***metal*** ***complex*** for organic electroluminescent device
IN Kido, Junji; Shimizu, Ikuo; Ikuta, Masanori; Katagi, Kyoko
PA Kyowa Yuka Co., Ltd., Japan
SO PCT Int. Appl., 28 pp.

CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM C07D207-335
ICS C07D277-54; C07D471-06; C09K011-06; H05B033-14
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 27
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004007447	A1	20040122	WO 2003-JP8854	20030711
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003252596	A1	20040202	AU 2003-252596	20030711
PRAI	JP 2002-202277	A	20020711		
	WO 2003-JP8854	W	20030711		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004007447	ICM	C07D207-335
	ICS	C07D277-54; C07D471-06; C09K011-06; H05B033-14
	IPCI	C07D0207-335 [ICM,7]; C07D0207-00 [ICM,7,C*]; C07D0277-54 [ICS,7]; C07D0277-00 [ICS,7,C*]; C07D0471-06 [ICS,7]; C07D0471-00 [ICS,7,C*]; C09K0011-06 [ICS,7]; H05B0033-14 [ICS,7]
	IPCR	C07D0207-00 [I,C*]; C07D0207-46 [I,A]; C09K0011-06 [I,A]; C09K0011-06 [I,C*]; H01L0051-05 [I,C*]; H01L0051-30 [I,A]; H01L0051-50 [N,A]; H01L0051-50 [N,C*]; H05B0033-14 [I,A]; H05B0033-14 [I,C*]
	ECLA	C07D207/46; C09K011/06; H01L051/30H; H01L051/30H8; H01L051/30M; H05B033/14
AU 2003252596	IPCI	C07D0207-335 [ICM,7]; C07D0207-00 [ICM,7,C*]; C07D0277-54 [ICS,7]; C07D0277-00 [ICS,7,C*]; C07D0471-06 [ICS,7]; C07D0471-00 [ICS,7,C*]; C09K0011-06 [ICS,7]; H05B0033-14 [ICS,7]
	IPCR	C07D0207-00 [I,C*]; C07D0207-46 [I,A]; C09K0011-06 [I,A]; C09K0011-06 [I,C*]; H01L0051-05 [I,C*]; H01L0051-30 [I,A]; H01L0051-50 [N,A]; H01L0051-50 [N,C*]; H05B0033-14 [I,A]; H05B0033-14 [I,C*]

OS MARPAT 140:136162
GI

/ Structure 4 in file .gra /

AB The invention relates to a ***squarylium*** compd. represented by I, wherein R1 and R2 are the same or ***different*** and each represents H, optionally substituted alkyl, etc.; R3, R4, R5, and R6 are the same or ***different*** and each represents H, optionally substituted alkyl, etc.; and R7, R8, R9, and R10 are the same or ***different*** and each represents H, hydroxy, halo, optionally substituted amino, etc. The ***squarylium*** compd. and its ***metal*** ***complex*** is suited for use in making an org. electroluminescent device.

ST ***squarylium*** compd ***metal*** ***complex*** red emitting org electroluminescent device

IT Electroluminescent devices
(***squarylium*** compd. and its ***metal*** ***complex*** for org. electroluminescent device)

IT 5970-45-6P, Zinc acetate dihydrate 648882-41-1P 648882-42-2P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP

(Preparation); USES (Uses)
(***squarylium*** compd. and its ***metal*** ***complex***
for org. electroluminescent device)
IT 517-22-6, 3-Ethyl-2,4-dimethylpyrrole 7787-56-6, Beryllium sulfate tetrahydrate 126434-67-1 175542-92-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(***squarylium*** compd. and its ***metal*** ***complex***
for org. electroluminescent device)
IT 648869-95-8P 648869-96-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(***squarylium*** compd. and its ***metal*** ***complex***
for org. electroluminescent device)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Keil, D; Dyes and Pigments 2001, V49(3), P161 CAPLUS
(2) Toyo Ink Manufacturing Co Ltd; JP 06-220438 A 1994 CAPLUS

L4 ANSWER 8 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:632743 CAPLUS <<LOGINID::20060727>>
DN 139:171330
ED Entered STN: 15 Aug 2003
TI Optical recording medium, optical recording method and optical recording device
IN Noguchi, Soh; Satoh, Tsutomu; Tomura, Tatsuya; Ueno, Yasunobu; Yashiro, Tohru; Ishimi, Tomomi; Shimizu, Ikuo; Kinugasa, Motoharu; Toyoda, Hiroshi; Yamada, Shiho
PA Ricoh Company, Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Yuka Co., Ltd.
SO Eur. Pat. Appl., 45 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1335357	A1	20030813	EP 2003-2913	20030210
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2003335060	A2	20031125	JP 2002-143691	20020517
	JP 3739722	B2	20060125		
	JP 2003305958	A2	20031028	JP 2002-148122	20020522
	JP 3739724	B2	20060125		
	US 2003206514	A1	20031106	US 2003-357813	20030204
	US 6794005	B2	20040921		
	CA 2418572	AA	20030812	CA 2003-2418572	20030210
	JP 2004042624	A2	20040212	JP 2003-139539	20030516
PRAI	JP 2002-34725	A	20020212		
	JP 2002-142718	A	20020517		
	JP 2002-143691	A	20020517		
	JP 2002-148122	A	20020522		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1335357	ICM	G11B007-24
	IPCI	G11B0007-24 [ICM,7]
	IPCR	G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-249 [I,A]
	ECLA	G11B007/244; G11B007/249
JP 2003335060	IPCI	B41M0005-26 [I,A]; G11B0007-244 [I,A]; G11B0007-24 [I,A]; G11B0007-258 [I,A]; C09B0023-00 [N,A]; C09B0047-18 [N,A]; C09B0047-20 [N,A]; C09B0047-22 [N,A]; C09B0047-04 [N,C*]; C09B0050-06 [N,A]; C09B0050-10 [N,A]; C09B0050-00 [N,C*]; C09B0057-00 [N,A]
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [N,A]; C09B0023-00 [N,C*]; C09B0047-04 [N,C*]; C09B0047-18 [N,A]; C09B0047-20 [N,A]; C09B0047-22 [N,A]; C09B0050-00 [N,C*]; C09B0050-06 [N,A]; C09B0050-10 [N,A]; C09B0057-00 [N,A]; C09B0057-00

[N,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]

JP 2003305958 IPCI B41M0005-26 [I,A]; G11B0007-004 [I,A]; G11B0007-00 [I,C*]; G11B0007-244 [I,A]; G11B0007-24 [I,A]; G11B0007-258 [I,A]; C09B0023-00 [N,A]; C09B0050-00 [N,A]; C09B0050-06 [N,A]; C09B0057-00 [N,A]

IPCR B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [N,A]; C09B0023-00 [N,C*]; C09B0050-00 [N,A]; C09B0050-00 [N,C*]; C09B0050-06 [N,A]; C09B0057-00 [N,A]; C09B0057-00 [N,C*]; G11B0007-00 [I,C*]; G11B0007-004 [I,A]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]

US 2003206514 IPCI G11B0003-70 [ICM,7]; G11B0003-00 [ICM,7,C*]; B32B0003-02 [ICS,7]

IPCR G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-249 [I,A]

NCL 369/288.000

ECLA G11B007/244; G11B007/249

CA 2418572 IPCI G11B0007-24 [ICM,7]

IPCR G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-249 [I,A]

JP 2004042624 IPCI B41M0005-26 [ICM,7]; G11B0007-0045 [ICS,7]; G11B0007-00 [ICS,7,C*]; G11B0007-24 [ICS,7]

IPCR B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G11B0007-00 [I,C*]; G11B0007-0045 [I,A]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]

FTERM 2H111/EA03; 2H111/EA25; 2H111/EA43; 2H111/FA12; 2H111/FA23; 2H111/FB42; 2H111/FB48; 5D029/JA04; 5D029/JC05; 5D029/MA13; 5D029/WB11; 5D029/WD10; 5D090/AA01; 5D090/BB03; 5D090/BB05; 5D090/CC01; 5D090/CC14; 5D090/KK06

OS MARPAT 139:171330

AB An optical recording medium has a substrate, and a recording layer provided on the substrate and contg.: (a) a formazan ***metal*** ***chelate*** including a formazan compd. and a ***metal*** component, (b) a ***squarylium*** ***metal*** ***chelate*** including a ***squarylium*** compd. and a ***metal*** component; and (c) at least one addnl. dye selected from phthalocyanine compds. and pentamethine cyanine compds. Alternatively, the recording layer contains (a) a first formazan ***metal*** ***chelate*** including a first formazan compd. and a first ***metal*** component and having the max. absorption wavelength in the range of 500-650 nm, (b) a ***squarylium*** ***metal*** ***chelate*** including a ***squarylium*** compd. and a ***metal*** component; and (c) a second formazan ***metal*** ***chelate*** including a second formazan compd. and a second ***metal*** component and having the max. absorption wavelength ***different*** from that of the first formazan ***metal*** ***chelate*** and in the range of 650-750 nm.

ST optical recording medium device formazan ***metal*** ***chelate***

IT Optical disks
Optical recording
(optical recording medium and device)

IT 573713-85-6D, ***chelate*** with Ni
RL: TEM (Technical or engineered material use); USES (Uses)
(formazan ***metal*** ***chelates*** ; deloptical recording medium and device)

IT 389132-70-1D, ***chelate*** with Ni 463945-11-1D, ***chelate*** with Cu 473299-18-2D, ***chelate*** with Ni 478535-02-3D, ***chelate*** with Ni 478535-04-5D, ***chelate*** with Co 478535-06-7D, ***chelate*** with Co 478535-07-8D, ***chelate*** with Cu 478535-09-0D, ***chelate*** with FeCl3 573713-74-3D, ***chelate*** with VCl3 573713-77-6D, ***chelate*** with Ni 573713-79-8D, ***chelate*** with Co 573714-10-0D, ***chelate*** with Ni 573714-14-4D, ***chelate*** with Ni 573714-19-9D, ***chelate*** with Ni 573714-25-7D, ***chelate*** with Ni 573714-31-5D, ***chelate*** with Cu 573714-38-2D, ***chelate*** with Co 573714-42-8D, ***chelate*** with Ni 573714-46-2D, ***chelate*** with Ni
RL: TEM (Technical or engineered material use); USES (Uses)
(formazan ***metal*** ***chelates*** ; optical recording medium and device)

IT 54389-98-9 56289-64-6 142315-00-2 143313-95-5 219581-10-9 573713-88-9 573713-94-7 573714-05-3 573714-08-6

RL: TEM (Technical or engineered material use); USES (Uses)
(pentamethine cyanine compd.; optical recording medium and device)
IT 546102-82-3 546102-85-6 546102-88-9 546102-90-3 577706-10-6
577706-11-7 577706-12-8 577706-13-9 577706-14-0
RL: TEM (Technical or engineered material use); USES (Uses)
(phthalocyanine compd.; optical recording medium and device)
IT 577706-09-3
RL: TEM (Technical or engineered material use); USES (Uses)
(phthalocyanine compd.; sto all george yoptical recording medium and device)
IT 345233-02-5D, ***chelate*** with ***Al*** 345233-06-9D, ***chelate*** with ***Al*** 478629-06-0D, ***chelate*** with ***Al*** 577740-86-4D, ***chelate*** with ***Al***
577740-88-6D, ***chelate*** with ***Al*** 577740-90-0D, ***chelate*** with ***Al*** 577740-92-2D, ***chelate*** with ***Al*** 577740-94-4D, ***chelate*** with ***Al***
577740-96-6D, ***chelate*** with ***Al*** 577740-98-8D, ***chelate*** with ***Al***
RL: TEM (Technical or engineered material use); USES (Uses)
(***squarylium*** ***metal*** ***chelate*** ; optical recording medium and device)
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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(2) K K Hayashibara Seibutsu Kagaku Kekyujo; EP 1103547 A 2001 CAPLUS
(3) Kodak; EP 0750020 A 1996 CAPLUS
(4) Kodak; EP 0837459 A 1998 CAPLUS
(5) Ricoh; EP 1267338 A 2002 CAPLUS
(6) Santoh, T; US 5190849 A 1993
(7) Tdk; EP 1041549 A 2000 CAPLUS

L4 ANSWER 9 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:963788 CAPLUS <<LOGINID::20060727>>
DN 138:47390
ED Entered STN: 20 Dec 2002
TI Optical recording medium for DVD-R system
IN Noguchi, Soh; Satoh, Tsutomu; Tomura, Tatsuya; Ueno, Yasunobu; Shimizu, Ikuo; Kinugasa, Motoharu; Toyoda, Hiroshi; Yamada, Shiho
PA Ricoh Company, Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Yuka Co., Ltd.
SO Eur. Pat. Appl., 78 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1267338	A2	20021218	EP 2002-13100	20020613
	EP 1267338	A3	20030528		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2002370451	A2	20021224	JP 2001-180475	20010614
	JP 2002370452	A2	20021224	JP 2001-180538	20010614
	JP 2002370453	A2	20021224	JP 2001-180565	20010614
	JP 2002370454	A2	20021224	JP 2001-180606	20010614
	US 2003157291	A1	20030821	US 2002-166742	20020611
	US 6737143	B2	20040518		
PRAI	JP 2001-180475	A	20010614		
	JP 2001-180538	A	20010614		
	JP 2001-180565	A	20010614		
	JP 2001-180606	A	20010614		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1267338	ICM	G11B007-24
	IPCI	G11B0007-24 [ICM,6]
	IPCR	G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-249 [I,A]
	ECLA	G11B007/244; G11B007/249

JP 2002370451 IPCI B41M0005-26 [ICM,7]; G11B0007-24 [ICS,7]
IPCR B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
JP 2002370452 IPCI B41M0005-26 [ICM,7]; C09B0023-00 [ICS,7]; C09B0050-00 [ICS,7]; C09B0050-06 [ICS,7]; C09B0057-00 [ICS,7]; G11B0007-24 [ICS,7]
IPCR B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0050-00 [I,A]; C09B0050-00 [I,C*]; C09B0050-06 [I,A]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
JP 2002370453 IPCI B41M0005-26 [ICM,7]; C09B0023-00 [ICS,7]; C09B0045-00 [ICS,7]; C09B0057-00 [ICS,7]; G11B0007-0045 [ICS,7]; G11B0007-00 [ICS,7,C*]; G11B0007-24 [ICS,7]
IPCR B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0045-00 [I,A]; C09B0045-00 [I,C*]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-00 [I,C*]; G11B0007-0045 [I,A]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
JP 2002370454 IPCI B41M0005-26 [ICM,7]; C09B0023-00 [ICS,7]; C09B0045-00 [ICS,7]; C09B0045-14 [ICS,7]; C09B0045-20 [ICS,7]; C09B0045-22 [ICS,7]; C09B0057-00 [ICS,7]; C09B0069-02 [ICS,7]; C09B0069-00 [ICS,7,C*]; G11B0007-0045 [ICS,7]; G11B0007-00 [ICS,7,C*]; G11B0007-24 [ICS,7]
IPCR B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0045-00 [I,A]; C09B0045-00 [I,C*]; C09B0045-14 [I,A]; C09B0045-20 [I,A]; C09B0045-22 [I,A]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0069-00 [I,C*]; C09B0069-02 [I,A]; G11B0007-00 [I,C*]; G11B0007-0045 [I,A]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
US 2003157291 IPCI B32B0003-02 [ICM,7]
IPCR G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-249 [I,A]
NCL 428/064.400
ECLA G11B007/244; G11B007/249
OS MARPAT 138:47390
GI

/ Structure 5 in file .gra /

AB An optical recording medium has a substrate and at least a recording layer disposed on the substrate, the recording layer comprises at least one ***squarylium*** ***metal*** ***chelate*** compd. which comprises a ***squarylium*** compd. and a ***metal*** ; and at least one azo ***metal*** ***chelate*** compd. which comprises another ***metal*** and an azo compd. expressed by the following formula I (A and B each independently expresses a residue forming one of (a) a heterocyclic ring which may comprise a substituent and (b) arom. ring which may comprise a substituent, by combination with corresponding carbon atoms resp. bonded to A or B, X expresses an active-hydrogen-contg. substituent group, and as further disclosed in the claims). The object of the invention is to provide an optical recording medium for DVD-R system recordable at a wavelength of 600-720 nm, showing excellent light resistance and shelf life, in particular, when it contains a ***squarylium*** compd.
ST optical recording medium disk DVDR ***squarylium*** compd
IT Optical disks
(optical recording medium for DVD-R system)
IT 3566-94-7D, nickel ***complex*** 4866-93-7D, cobalt ***complex*** 4866-93-7D, cobalt ***complex*** , cyanine dye ***salt*** 7439-96-5D, Manganese, coordination ***complex*** with azo dye 7440-02-0D, Nickel, coordination ***complex*** with azo or formazan dye 7440-48-4D, Cobalt, coordination ***complex*** with azo or formazan dye 7440-50-8D, Copper, coordination ***complex*** with azo or formazan dye 14337-52-1D, manganese ***complex*** 50783-86-3D, cobalt ***complex*** , dimethylammonium ***salt*** 50783-86-3D, copper ***complex*** , cyanine dye ***salt*** 208340-09-4D, nickel ***complex*** 210556-42-6D, cobalt ***complex*** , trimethylammonium ***salt*** 210556-43-7D, cobalt ***complex*** ,

dimethylbutylammonium ***salt*** 219656-37-8D, zinc chloride ***complex*** 344933-91-1 344933-97-7 344934-01-6 345233-00-3 345233-03-6 473299-16-0D, nickel ***complex*** 478534-92-8D, manganese ***complex*** 478534-93-9D, cobalt ***complex*** , octyldimethylammonium ***salt*** 478534-94-0D, copper ***complex*** 478534-95-1D, nickel ***complex*** 478534-96-2D, cobalt ***complex*** 478534-97-3D, nickel ***complex*** 478534-98-4D, nickel ***complex*** 478534-99-5D, nickel ***complex*** 478535-00-1D, copper ***complex*** 478535-01-2D, copper ***complex*** 478535-02-3D, nickel ***complex*** 478535-03-4D, copper ***complex*** 478535-04-5D, cobalt ***complex*** 478535-05-6D, copper ***complex*** 478535-06-7D, cobalt ***complex*** 478535-07-8D, copper ***complex*** 478535-08-9D, nickel ***complex*** 478535-09-0D, iron chloride ***complex*** 478535-10-3D, cobalt ***complex*** 478535-11-4D, cobalt ***complex*** 478535-12-5D, nickel ***complex*** 478535-13-6D, nickel ***complex*** 478628-86-3 478628-87-4 478628-88-5 478628-89-6 478628-89-6 478628-90-9 478628-91-0 478628-92-1 478628-93-2 478628-94-3 478628-95-4 478628-96-5 478628-97-6 478628-98-7 478629-00-4 478629-01-5 478629-02-6 478629-03-7 478629-04-8 478629-05-9 478629-06-0 478629-07-1
RL: TEM (Technical or engineered material use); USES (Uses)
(optical recording medium for DVD-R system comprising mixts. of ***squarylium*** and azo ***metal*** ***chelate*** compds.)

L4 ANSWER 10 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:913302 CAPLUS <<LOGINID::20060727>>
DN 136:233513
ED Entered STN: 19 Dec 2001
TI Investigation of the spectral properties of a ***squarylium*** near-infrared dye and its ***complexation*** with Fe(III) and Co(II) ions
AU Tarazi, Leila; Narayanan, Nara; Sowell, John; Patonay, Gabor; Strekowski, Lucjan
CS Department of Chemistry, Georgia State University, Atlanta, GA, 30303, USA
SO Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy (2002), 58A(2), 257-264
CODEN: SAMCAS; ISSN: 1386-1425
PB Elsevier Science B.V.
DT Journal
LA English
CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 73, 79
AB The spectral features of the ***squarylium*** dye NN525 in ***different*** solns. and its ***complexation*** with several ***metal*** ions were investigated. The absorbance max. of the dye is at 669 nm in THF. This value matches the output of a com. available laser diode (650 nm), thus making use of such a source practical for excitation. The emission max. of the dye in THF is at 676 nm. The addn. of either Fe(III) ion or Co(II) ion resulted in fluorescence quenching of the dye. The detection limit is 6.24.times.10-8 M for Fe(III) ion and 1.55.times.10-8 M for Co(II) ion. The molar ratio of the ***metal*** to the dye was established to be 1:1 for both ***metal*** ions. The stability const. KS of the ***metal*** -dye ***complex*** was calcd. to be 3.14 .times. 106 M-1 for the Fe-dye ***complex*** and 2.64 .times. 105 M-1 for the Co-dye ***complex*** .
ST ***squarylium*** near IR dye cobalt iron ***complexation*** THF
IT Fluorescence quenching
Fluorometry
(cobalt and iron detn. by fluorescence quenching of ***squarylium*** near-IR dye)
IT ***Complexation***
(in cobalt and iron detn. by fluorescence quenching of ***squarylium*** near-IR dye)
IT Fluorescence
(investigation of spectral properties of ***squarylium*** near-IR dye and its ***complexation*** with ***metal*** ions in THF)
IT Formation constant
(of cobalt and iron ***complexes*** with ***squarylium*** near-IR dye)
IT Solvent polarity effect

(on fluorescence and absorption spectra of ***squarylium*** near-IR dye)
IT 7440-48-4, Cobalt, properties
RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(investigation of spectral properties of ***squarylium*** near-IR dye and its ***complexation*** with Co(II) ions in THF)
IT 256924-69-3, NN 525
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(investigation of spectral properties of ***squarylium*** near-IR dye and its ***complexation*** with Co(II) ions in THF)
IT 7439-89-6, Iron, properties
RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(investigation of spectral properties of ***squarylium*** near-IR dye and its ***complexation*** with Fe(III) ions in THF)
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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(2) Barrero, J; Talanta 1993, V40, P1619 CAPLUS
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L4 ANSWER 11 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:896347 CAPLUS <<LOGINID::20060727>>
DN 136:225958
ED Entered STN: 13 Dec 2001
TI Optical detection of Cu2+ ion using a SQ-dye containing polymeric thin-film on Au surface

AU Ock, Kyungsik; Jang, Gabsoo; Roh, Yongrae; Kim, Sunghoon; Kim, Jaeho; Koh, Kwangnak
CS Department of Sensor Engineering, Kyungpook National University, Graduate

School, Taegu, 702-701, S. Korea
SO Microchemical Journal (2001), 70(3), 301-305
CODEN: MICJAN; ISSN: 0026-265X
PB Elsevier Science B.V.
DT Journal
LA English
CC 79-2 (Inorganic Analytical Chemistry)
AB The authors have fabricated Cu2+ ion sensor using a ***squarylium*** dye (SQ-dye) contg. polymeric thin-film. Surface Plasmon Resonance (SPR) was used as a signal amplifier to achieve high sensitivity and large linear dynamic range for detection of Cu2+ ion. High selectivity to Cu2+ ion was obtained by the effective electrostatic interaction between SQ-dye and Cu2+ ion in the polymeric film. The optimal anal. condition of high selectivity and sensitivity in the wider linear dynamic range obtained in this study may be a result of the cooperative hard-soft ***metal*** ion- ***ligand*** interaction and effective detection of refractive index changes by the ***complexation*** of Cu2+ ion and SQ-dye in SPR measurement. Among 10 ***different*** alkali ***metal*** , alk. earth ***metal*** , and transition ***metal*** ions, SQ-dye in poly(vinylchloride)-poly(vinyl acetate)-poly(vinyl alc.) (PVC-PVAc-PVA) copolymer film showed the highest selectivity to Cu2+ ion. Although the interaction between SQ-dye and ***metal*** ions was not well understood, both cooperative hard-soft ***metal*** ion- ***ligand*** interaction and size-selective recognition of Cu2+ ion to SQ-dye may contribute to high selectivity. Also, addnl. sensitivity in the detection of Cu2+ ion by SPR was obtained by matching the wavelength of probing radiation of SPR and absorption max. of SQ-dye at 675 nm, which allow to detect small changes in the refractive index by ***complex*** formation on the sensing surface. This result may apply in development of the Cu2+ ion selective sensor for medical, biochem., and environmental applications.
ST copper ion optical detection ***squarylium*** dye polymer film gold
IT Optical sensors
(optical detection of Cu2+ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
IT Surface plasmon
(resonance; optical detection of Cu2+ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
IT Dyes
(***squarylium*** ; optical detection of Cu2+ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
IT 7440-50-8, Copper, analysis
RL: ANT (Analyte); ANST (Analytical study)
(optical detection of Cu2+ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
IT 12243-46-8P
RL: ARG (Analytical reagent use); DEV (Device component use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(optical detection of Cu2+ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
IT 7440-57-5, Gold, analysis 25086-48-0, Vinyl acetate-vinyl alcohol-vinyl chloride copolymer
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(optical detection of Cu2+ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
IT 1640-39-7, 2,3,3-Trimethylindolenine 2892-51-5, Squaric acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(optical detection of Cu2+ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
IT 5418-63-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(optical detection of Cu2+ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L4 ANSWER 12 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:636906 CAPLUS <<LOGINID::20060727>>
ED Entered STN: 02 Sep 2001
TI Optical detection of Cu2+ ion using a SQ-dye containing polymeric thin-film
AU Kim, Tae-il; Kim, Jae-Ho; Kim, Sung-Hoon; Koh, Kwangnak
CS Department of Molecular Science and Technology, Ajou University, Suwon, 442-749, S. Korea
SO Abstracts of Papers, 222nd ACS National Meeting, Chicago, IL, United States, August 26-30, 2001 (2001), ANYL-108 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69BUZP
DT Conference; Meeting Abstract
LA English
AB In this study, we have fabricated Cu2+ ion sensor using a ***squarylium*** dye (SQ-dye) contg. polymeric thin-film. Surface plasmon resonance (SPR) was used as a signal amplifier to achieve high sensitivity and large linear dynamic range for detection of Cu2+ ion. High selectivity to Cu2+ ion was obtained by the effective electrostatic interaction between SQ-dye and Cu2+ ion in the polymeric film. The optimal anal. condition of high selectivity and sensitivity in the wider linear dynamic range obtained in this study may be result of the cooperative "hard-soft" ***metal*** ion- ***ligand*** interaction and effective detection of refractive index changes by the ***complexation*** of Cu2+ ion and SQ-dye in SPR measurement. Among 10 ***different*** alkali ***metal*** , alk. earth ***metal*** , and transition ***metal*** ions, SQ-dye in poly(vinylchloride)-poly(vinyl acetate)- poly(vinyl alc.) copolymer film showed the highest selectivity to Cu2+ ion. Although the interaction between SQ-dye and ***metal*** ions has not been well undestood, both cooperative "hard-soft" ***metal*** ion- ***ligand*** interaction and size-selective recognition of Cu2+ ion to SQ-dye may contribute to high selectivity. Furthermore, addnl. sensitivity in the detection of Cu2+ ion by SPR was obtained by matching the wavelength of probing radiation of SPR and absorption maximun of SQ-dye at 670 nm, which allow to detect small changes in the refractive index by ***complex*** formation on the sensing surface. Details of spectroscopic investigation of Cu2+ ion ***complex*** with SQ-dye will be included in the presentation. This result may apply in development of the Cu2+ ion selective sensor for medical, biochem., and environmental applications.

L4 ANSWER 13 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:626116 CAPLUS <<LOGINID::20060727>>
DN 135:192503
ED Entered STN: 29 Aug 2001
TI Simultaneous multimodal measurement of physiological function
IN Combs, Arthur H.; Dorshow, Richard B.; Bugaj, Joseph E.; Rajagopalan, Raghavan; Achilefu, Samuel I.
PA Mallinckrodt Inc., USA
SO U.S., 12 pp., Cont.-in-part of U.S. Ser. No. 258,148.
CODEN: USXXAM
DT Patent
LA English
IC ICM A61K049-00
ICS G01N031-00
INCL 424009100
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 13
FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	US 6280703	B1	20010828	US 2000-519455	20000306
	US 5928625	A	19990727	US 1997-816332	19970313
	EP 1618899	A2	20060125	EP 2005-77066	19980129
	EP 1618899	A3	20060201		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6228344	B1	20010508	US 1999-258148	19990226
	WO 2001066152	A1	20010913	WO 2001-US6589	20010301
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1263477	A1	20021211	EP 2001-918287	20010301
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003525914	T2	20030902	JP 2001-564804	20010301
	EP 1604689	A1	20051214	EP 2005-76919	20010301
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
PRAI	US 1997-816332	A2	19970313		
	US 1999-258148	A2	19990226		
	EP 1998-903793	A3	19980129		
	US 2000-519455	A	20000306		
	EP 2001-918287	A3	20010301		
	WO 2001-US6589	W	20010301		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6280703	ICM	A61K049-00
	ICS	G01N031-00
	INCL	424009100
	IPCI	A61K0049-00 [ICM,7]; G01N0031-00 [ICS,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
	NCL	424/009.100; 424/001.110; 424/009.600
	ECLA	A61K049/00P4F
US 5928625	IPCI	A61K0049-00 [ICM,6]; G01N0031-00 [ICS,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
	NCL	424/009.100; 424/001.110; 424/009.600
	ECLA	A61K049/00P4F
EP 1618899	IPCI	A61K0049-00 [I,A]
US 6228344	IPCI	A61K0049-00 [ICM,7]; G01N0031-00 [ICS,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
	NCL	424/009.100; 424/001.110; 424/009.600
	ECLA	A61K049/00P4F
WO 2001066152	IPCI	A61K0049-00 [ICM,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
	ECLA	A61B005/00P; A61K049/00F
EP 1263477	IPCI	A61K0049-00 [ICM,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
JP 2003525914	IPCI	A61K0049-00 [ICM,7]; A61K0051-00 [ICS,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
EP 1604689	IPCI	A61K0049-00 [ICM,7]; A61B0005-00 [ICS,7]; G01N0033-00 [ICS,7]
	ECLA	A61B005/0275; A61B005/00P; A61B005/00P4; A61K049/00F; A61K049/00P4F; A61K051/04L

AB A method of measuring physiol. function of a group of body cells, includes the step of selecting a detectable agent capable of absorbing or emitting a measurable electromagnetic emission. The agent is introduced into body fluid which contacts the group of body cells. The absorbance or emission is measured, and physiol. function is detd. based on measurement of the absorbance or emission. Measurements may be made noninvasively or with the use of a modified pulmonary artery catheter. Multiple agents which can be distinguished from each other can be utilized simultaneously to measure multiple physiol. functions at the same time. Aq. solns. of indocyanine green dye at 0.42 mg/mL and fluorescein-polyaspartic acid bioconjugate at 8 mg/mL were ***mixed*** together. This combined

soln. was injected i.v. into a rat and fluorescence was monitored from the ear. Incident light on the ear was at both 488 nm and 780 nm. Two detectors of fluorescent light were set at 520 nm and 830 nm. The two clearance curves are readily distinguishable. ICG is known to be cleared from the blood stream by the liver and fluorescein-polyaspartic acid is cleared by the kidney. The curves show the simultaneous measurement of both hepatic and renal function.

ST multimodal detn physiol function tracer; liver function indocyanine green fluorometry; kidney function fluorescein polyaspartate conjugate fluorometry

IT Chromophores
Paramagnetic materials
(as tracers; simultaneous multimodal measurement of physiol. function)

IT Medical goods
(catheters; simultaneous multimodal measurement of physiol. function)

IT Biochemical molecules
(conjugates with polyanionic fluorescein, as tracers; simultaneous multimodal measurement of physiol. function)

IT Imaging agents
(contrast, radiog.; simultaneous multimodal measurement of physiol. function)

IT Unsaturated compounds
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(cyanines, as tracers; simultaneous multimodal measurement of physiol. function)

IT Ear
(fluorescence monitoring in rat; simultaneous multimodal measurement of physiol. function)

IT Tracers
(fluorescent; simultaneous multimodal measurement of physiol. function)

IT Fluorescent substances
(fluorophores, as tracers; simultaneous multimodal measurement of physiol. function)

IT Dyes
(indocyanine, as tracers; simultaneous multimodal measurement of physiol. function)

IT Drug delivery systems
(injections, i.v., tracer administration by; simultaneous multimodal measurement of physiol. function)

IT Drug delivery systems
(injections, tracer administration by; simultaneous multimodal measurement of physiol. function)

IT UV and visible spectroscopy
(light-scattering; simultaneous multimodal measurement of physiol. function)

IT Blood vessel
(near surface of skin; simultaneous multimodal measurement of physiol. function)

IT Skin
(noninvasive surface monitoring through; simultaneous multimodal measurement of physiol. function)

IT Artery
(pulmonary, modified catheter; simultaneous multimodal measurement of physiol. function)

IT Isotope indicators
(radiopharmaceutical tracers; simultaneous multimodal measurement of physiol. function)

IT Animal tissue
Blood analysis
Body, anatomical
Body fluid
Brain
Cell
Endoscopes
Fluorometry
Heart
Kidney
Liver
Neoplasm
Organ, animal

Physiology, animal
Spectroscopy
Tracers
(simultaneous multimodal measurement of physiol. function)

IT Particles
(superparamagnetic iron oxide, as tracers; simultaneous multimodal measurement of physiol. function)

IT Paramagnetic materials
(superparamagnetic, iron oxide particles, as tracers; simultaneous multimodal measurement of physiol. function)

IT Fluorescent substances
(tracers; simultaneous multimodal measurement of physiol. function)

IT Fiber optic sensors
(wavelength-specific, in modified pulmonary artery catheters; simultaneous multimodal measurement of physiol. function)

IT 881-17-4 3599-32-4, Indocyanine green 12558-57-5, 51Cr-EDTA 12775-34-7, 99mTc-DTPA 14133-76-7D, ***complexes*** , biological studies 20694-16-0 59160-29-1D, HIDA, Tc-99m ***complexes*** 83150-76-9D, Octreotide, Tc-99m DTPA conjugates 104348-91-6, 99mTc-MAG3 109581-73-9 121281-41-2 127502-06-1D, Tetrofosmin, Tc-99m ***complexes*** 357171-45-0
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as tracer; simultaneous multimodal measurement of physiol. function)

IT 2321-07-5D, Fluorescein, compds. and polyanionic bioconjugates 25608-40-6D, Polyaspartic acid, conjugates with fluorescein 26063-13-8D, Polyaspartic acid, conjugates with fluorescein 78675-98-6D, ***Squaraine*** , compds.
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as tracers; simultaneous multimodal measurement of physiol. function)

IT 1309-37-1, Iron oxide, biological studies
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(superparamagnetic particles, as tracers; simultaneous multimodal measurement of physiol. function)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L4 ANSWER 14 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:452976 CAPLUS <<LOGINID::20060727>>
DN 133:67960
ED Entered STN: 06 Jul 2000
TI Investigation of the spectral properties of a ***squarylium*** near-infrared dye and its ***complexation*** with Fe(III) and Co(II) ions
AU Tarazi, Leila; Narayanan, Nara; Patonay, Gabor
CS Department of Chemistry, Georgia State University, Atlanta, GA, 30303, USA
SO Microchemical Journal (2000), 64(3), 247-256
CODEN: MICJAN; ISSN: 0026-265X
PB Elsevier Science B.V.
DT Journal
LA English
CC 79-6 (Inorganic Analytical Chemistry)
Section cross-reference(s): 68, 72
AB The spectral features of the ***squarylium*** near-IR (NIR) dye NN525 in ***different*** solns. and its ***complexation*** with several ***metal*** ions were studied. The absorbance max. of the dye is .lambda. = 663 nm in MeOH. This value matches the output of a commonly available laser diode (650 nm), thus making use of such a source practical for excitation. The emission wavelength of the dye in MeOH is .lambda.em = 670 nm. The addn. of either Fe(III) ion or Co(II) ion resulted in fluorescence quenching of the dye. The Stern-Volmer quenching const., KSV, was calcd. from the Stern-Volmer plot to be KSV = 2.70 .times. 107 M-1 for Co(II) ion. The KSV value for Fe(III) ion could not be established due to the nonlinearity of the Stern-Volmer plot and the modified Stern-Volmer plot for this ion. The detection limit is 6.24 .times. 10-8 M for Fe(III) ion and 1.55 .times. 10-5 M for Co(III) ion. The molar ratio of the ***metal*** to the dye is 1:1 for both ***metal*** ions. The stability const., KS, of the ***metal*** -dye ***complex*** is 3.14 .times. 106 M-1 for the Fe-dye ***complex*** and 2.64 .times. 105 M-1 for the Co-dye ***complex*** .
ST spectral property ***squarylium*** IR dye; iron detn fluorescence quenching ***squarylium*** IR dye; cobalt detn fluorescence quenching ***squarylium*** IR dye; stability const iron cobalt ***complex*** ***squarylium*** dye
IT ***Complexation***
(investigation of the spectral properties of a ***squarylium*** near-IR dye and its ***complexation*** with Fe(III) and Co(II) ions)
IT Fluorescence quenching
Fluorometry
(iron and cobalt detn. by fluorescence quenching of a ***squarylium*** near-IR dye)
IT Fluorescence
(of a ***squarylium*** near-IR dye)
IT Formation constant
(of iron and cobalt ***complexes*** with a ***squarylium*** near-IR dye)
IT 7439-89-6, Iron, analysis 7440-48-4, Cobalt, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. by fluorescence quenching of a ***squarylium*** near-IR dye)
IT 256924-69-3, NN525
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(investigation of the spectral properties of a ***squarylium*** near-IR dye and its ***complexation*** with Fe(III) and Co(II) ions)
RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L4 ANSWER 15 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:379774 CAPLUS <<LOGINID::20060727>>
DN 133:35693
ED Entered STN: 08 Jun 2000
TI Novel ***squaraine*** signaling Zn(II) ions: three-state fluorescence response to a single input
AU Dilek, Gulay; Akkaya, Engin U.
CS Department of Chemistry, Middle East Technical University, Ankara, TR-06531, Turk.
SO Tetrahedron Letters (2000), 41(19), 3721-3724
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 22, 27
AB A novel ***metal*** ion sensitive 2,3,3-trimethyl-3H-indole-derived ***squaraine*** dye showing ***different*** fluorescence responses depending on the ***complexation*** stoichiometry was synthesized. Thus, 3 levels of signals are attainable by varying the Zn(II) ion concn.
ST zinc ***squaraine*** deriv ***complex*** fluorescence
IT Fluorescence
(zinc ***complex*** with ***squaraine*** deriv. with three-state fluorescence response to single input)
IT 7440-66-6D, Zinc, ***squaraine*** deriv. ***complex*** , properties
273759-71-0D, zinc ***complex***

RL: PRP (Properties)
(zinc ***complex*** with ***squaraine*** deriv. with three-state fluorescence response to single input)
IT 1640-39-7 2212-32-0 2892-51-5 273759-70-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(zinc ***complex*** with ***squaraine*** deriv. with three-state fluorescence response to single input)
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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L4 ANSWER 16 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:630852 CAPLUS <<LOGINID::20060727>>
DN 127:294749
ED Entered STN: 03 Oct 1997
TI Putty compositions and repairing method therewith

IN Sukejima, Hajime; Tomita, Shinji; Suzuki, Ryuichi
PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
IC ICM C09D005-34
ICS C08F290-00; C08F290-06; C09D004-00; C09D004-06
CC 42-11 (Coatings, Inks, and Related Products)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09249831	A2	19970922	JP 1996-58610	19960315
PRAI JP 1996-58610		19960315		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 09249831	ICM	C09D005-34
	ICS	C08F290-00; C08F290-06; C09D004-00; C09D004-06
	IPCI	C09D0005-34 [ICM,6]; C08F0290-00 [ICS,6]; C08F0290-06 [ICS,6]; C09D0004-00 [ICS,6]; C09D0004-06 [ICS,6]

GI

/ Structure 6 in file .gra /

AB Title compns. contain polymerizable unsatd. group-contg. resins, polymerizable unsatd. compds., and near IR initiators. A compn. contg. Ripoxy SP 1507, styrene, and a cyanine colorant ***complex*** initiator (I) was curable by 1500-W halogen lamp set at a 15-cm distance over 10 min and showed good adhesion to soft steel or ***Al*** panels and to acrylic urethane topcoats.

ST near IR initiator unsatd polymer putty; ***metal*** adhesion near IR curable putty; coatability near IR curable putty

IT Epoxy resins, uses
Polyurethanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(acrylic; near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)
IT Dyes
(***complexes*** ; near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)
IT Acrylic polymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(epoxy; near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)
IT Putty
(near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)
IT Catalysts
(photochem., near IR; near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)
IT Acrylic polymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polyurethane-; near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)
IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(unsatd.; near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)
IT 12243-46-8
RL: CAT (Catalyst use); USES (Uses)
(blends with ***metal*** ***chelates*** ; near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)
IT 12176-31-7
RL: CAT (Catalyst use); USES (Uses)
(blends with ***squarylium*** colorants; near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)
IT 126609-59-4 153121-11-0D, ruthenium ***complexes*** , borate ***salts***
RL: CAT (Catalyst use); USES (Uses)
(near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)
IT 7429-90-5, Aluminum, miscellaneous
RL: MSC (Miscellaneous)
(near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)
IT 184179-27-9, Isobornyl acrylate-Ripoxy SP 5003 copolymer 191089-69-7, Ripoxy SP 1507-styrene copolymer 191089-70-0, 2-Hydroxyethyl acrylate-isobornyl acrylate-Ripoxy SP 1507 copolymer 191159-17-8 191339-02-3 191339-10-3, Acrydic A 801P-Duranate TPA 90E-Ripoxy SP 1507-styrene copolymer 196521-58-1, Duranate MF B;2-hydroxyethyl acrylate;Ripoxy SP 5003 copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)
IT 7440-18-8D, Ruthenium, ***complexes*** with quinolinone derivs., borate salts, uses
RL: CAT (Catalyst use); USES (Uses)
(soft; near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)
IT 12597-69-2, Steel, miscellaneous
RL: MSC (Miscellaneous)
(soft; near IR initiator-contg. unsatd. resin putty with good adhesion to ***metals*** and topcoats)

L4 ANSWER 17 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:591931 CAPLUS <<LOGINID::20060727>>
DN 123:241686
ED Entered STN: 07 Jun 1995
TI ***Squaraine*** Chemistry. Absorption, Fluorescence Emission, and Photophysics of Unsymmetrical ***Squaraines***
AU Law, Kock-Yee
CS Joseph C. Wilson Center for Research and Technology, Xerox Corporation,

Webster, NY, 0114-39, USA
SO Journal of Physical Chemistry (1995), 99(24), 9818-24
CODEN: JPCHAX; ISSN: 0022-3654
PB American Chemical Society
DT Journal
LA English
CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 73
AB The absorption, fluorescence emission, and photophysics of 4-(methoxyphenyl)-4'-[(dimethylamino)phenyl] ***squaraine*** and its derivs. (USq1-USq14) a class of unsym. donor-acceptor-donor (D-A-D) compds., have been investigated. Similar to sym. and pseudo-unsym. (with two ***different*** aniline rings) ***squaraines*** , USq1-USq14 also exhibit intense absorption bands in the visible region. Their absorption maxima (.lambda.max) range from 562 to 593 nm and are blue-shifted relative to those of sym. and pseudo-unsym. ***squaraines*** . The blue-shift is attributed to the decrease in the D-A-D CT character, arising from the introduction of a less electron-donating anisole ring. As it turned out, the introduction of asymmetry through the anisole ring has a significant impact on the electronic spectra. The asymmetry in USq1-USq14 enhances vibronic coupling during electronic transition, producing vibrational fine structures in both absorption and fluorescence spectra. The vibronic coupling is particularly pronounced when the C-O group in the central four-membered ring is H-bonded, either intramolecularly or intermolecularly with solvent mols. USq1-USq14 are shown to form solvent ***complexes*** with solvent mols. The multiple fluorescences obsd. for these compds., although quite ***complex*** , are shown to be the sum of the vibronic bands of the unsym. ***squaraine*** and its ***complex*** . At room temp. in soln., the .phi.f values for USq1-USq14 are a factor of .gtoreq.30 lower than those of sym. and pseudo-unsym. ***squaraines*** . Their lifetimes are .ltoreq.0.25 ns. There is a large temp. effect on both .phi.f and lifetime. At 77 K in a 2-methyltetrahydrofuran matrix, the .phi.f values approach .gtoreq.0.5 and the fluorescence lifetimes increase to a const. value, .apprx.2.4 ns. Hydroxy unsym. ***squaraines*** are an exception; they exhibit biexponential decays (.apprx.2.4 ns and a subnanosecond decay) at 77 K in 2-methyltetrahydrofuran. The observation may be attributable to a conformational effect. The large temp. effect on the photophys. processes indicates that there exists an efficient radiationless decay process for these compds. Evidence is provided that rotation of the C-C bond between the anisole ring and the four-membered ring is responsible for the radiationless decay. The fast decay is attributable to the single-bond character of the rotating C-C bond in these compds. Substituents, both in the aniline ring and the anisole ring, are shown to have effects on the electronic spectra. These substituent effects are discussed in terms of their effects on the D-A-D CT character of the ***squaraine*** chromophore.
ST photophysics fluorescence optical absorption ***squaraine*** chromophore; electrophotog photoreceptor unsym ***squaraine*** photophys
IT Fluorescence
Substituent effect
Ultraviolet and visible spectra
(absorption and fluorescence lifetime and photophysics of unsym. ***squaraines***)
IT Electrophotographic photoconductors and photoreceptors
(absorption and fluorescence lifetime and photophysics of unsym. ***squaraines*** for)
IT Energy level transition
(electronic, absorption and fluorescence lifetime and photophysics of unsym. ***squaraines***)
IT 126288-46-8 126288-47-9 126288-48-0 126288-49-1 126288-50-4
126288-52-6 126288-53-7 126288-54-8 126288-55-9 126288-56-0
126288-57-1 126288-58-2 142692-37-3 142692-39-5
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(absorption and fluorescence lifetime and photophysics of unsym. ***squaraines***)

L4 ANSWER 18 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:294823 CAPLUS <<LOGINID::20060727>>
DN 122:242313
ED Entered STN: 14 Jan 1995
TI Polymerization initiation photosensitizers from ***squarylium*** dyes
IN Mitekura, Hirofumi; Suga, Sadaji; Yasui, Shigeo
PA Nippon Kanko Shikiso Kenkyusho, Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08F002-50
ICS C07D209-12; C09B056-16; G03F007-028
CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 35

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06287210	A2	19941011	JP 1993-115142	19930405

PRAI JP 1993-115142 19930405

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 06287210	ICM	C08F002-50
	ICS	C07D209-12; C09B056-16; G03F007-028
	IPCI	C08F0002-50 [ICM,5]; C08F0002-46 [ICM,5,C*]; C07D0209-12 [ICS,5]; C07D0209-00 [ICS,5,C*]; C09B0056-16 [ICS,5]; C09B0056-00 [ICS,5,C*]; G03F0007-028 [ICS,5]

OS MARPAT 122:242313
GI

/ Structure 7 in file .gra /

AB The photosensitizers are composed of ***squarylium*** dyes I (R1 = alkyl, alkoxy; R2 = H, alkyl, alkoxy; R3, R4 = C1-10 alkyl which may be interrupted by O). Thus, 0.05 mol 1,3,3,5-tetramethyl-2-methyleneindoline and 0.0025 mol 1,2-dihydroxy-1-cyclobutene-3,4-dione were heated under reflux in a mixt. of BuOH and benzene, cooled, pptd., filtered, washed, and dried to give 5.4 g of a cryst. material with m.p. 305.degree. and .lambda.max 642 nm in CH2Cl2, 1 part of which was ***mixed*** with acrylic acid-methacrylate ester copolymer 100, pentaerythritol triacrylate 100, 3,3',4,4'-tetrakis(tert-butylperoxycarbonyl)benzophenone 8, and Et Cellosolve 900 parts, applied to an ***Al*** plate, overcoated with poly(vinyl alc.), and exposed to 630-nm irradn., showing sensitivity 0.6 mJ/cm2.

ST photosensitizer ***squarylium*** pigment

IT Dyes
(***squarylium*** dyes as photosensitizers for polymn.)

IT Polymerization catalysts
(photochem., ***squarylium*** dyes as photosensitizers for polymn.)

IT 77473-08-6, 3,3',4,4'-Tetrakis(tert-butylperoxycarbonyl)benzophenone
RL: CAT (Catalyst use); USES (Uses)
(photopolymerizable compns. contg.; ***squarylium*** dyes as photosensitizers for polymn.)

IT 79-10-7D, 2-Propenoic acid, polymers with methacrylate esters 79-41-4D, esters, polymers with acrylic acid 103106-58-7, Carboset XL 44
RL: NUU (Other use, unclassified); USES (Uses)
(photopolymerizable compns. contg.; ***squarylium*** dyes as photosensitizers for polymn.)

IT 3524-68-3
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(photopolymerizable compns. contg.; ***squarylium*** dyes as photosensitizers for polymn.)

IT 161763-64-0P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of ***squarylium*** dyes as photosensitizers for polymn.)

IT 118-12-7, 1,3,3-Trimethyl-2-methyleneindoline 2892-51-5, Squaric acid 2892-63-9, 3-Cyclobutene-1,2-dione, 3,4-dichloro- 39578-87-5,

1,3,3,5-Tetramethyl-2-methyleneindoline
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of ***squarylium*** dyes as photosensitizers for polymn.)
IT 68842-67-1P 162342-84-9P
RL: CAT (Catalyst use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(***squarylium*** dyes as photosensitizers for polymn.)
IT 125597-33-3 162342-81-6 162342-82-7 162342-83-8
RL: CAT (Catalyst use); PRP (Properties); USES (Uses)
(***squarylium*** dyes as photosensitizers for polymn.)

L4 ANSWER 19 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:25613 CAPLUS <<LOGINID::20060727>>
DN 122:326239
ED Entered STN: 08 Nov 1994
TI Large photorefractive effect in a thermally decomposed polymer compared with that in molecularly doped systems
AU Yokoyama, Kenji; Arishima, Koichi; Sukegawa, Ken
CS NTT Opto-electronics Lab., Tokai/Ibaraki, 319-11, Japan
SO Applied Physics Letters (1994), 65(2), 132-4
CODEN: APPLAB; ISSN: 0003-6951
DT Journal
LA English
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 73, 76
AB Photorefractive polymers with the same electrooptic effect were fabricated to investigate the photorefractive effects in ***different*** photoconductive systems. The photoconduction in the polymers was varied by the addn. of ***squarylium*** dye to diethylaminobenzaldehydediphenylhydrazone (DEH), by the formation of a charge-transfer ***complex*** between tetracyanoquinodimethane and DEH, and by the thermal decompn. of DEH. The largest photorefractive effect was obsd. in the thermally decompd. polymer among these polymers. A diffraction efficiency of 1.1% and a beam-coupling gain coeff. of 10 cm-1 were achieved in a 34.9 V/.mu.m d.c. elec. field.
ST photorefractive effect photoconductive polymer system; electrooptic effect photorefractive photoconductive polymer system
IT Photorefractive effect
(in ***different*** photoconductive systems)
IT Polycarbonates, properties
RL: PRP (Properties)
(large photorefractive effect in thermally decompd. photoconductor system of)
IT Electrooptical effect
(photorefractive effect in ***different*** photoconductive systems)
IT Photoconductors
(photorefractive effect in photoconductive system contg. doped polymer matrix)
IT Electrophotographic photoconductors and photoreceptors
(photorefractive effect in photoconductive system contg. doped polymer matrix in relation to)
IT Dyes
(***squarylium*** dye dopant; photorefractive effect in photoconductive system contg. doped polymer matrix and ***squarylium***)
IT 1518-16-7, TCNQ 68189-23-1, p-Diethylaminobenzaldehydediphenylhydrazone
RL: PRP (Properties)
(dopant; photorefractive effect in photoconductive system contg. doped polymer matrix and)
IT 88422-19-9
RL: PRP (Properties)
(photorefractive effect in photoconductive system contg. doped polymer matrix and)
IT 9011-14-7, PMMA
RL: PRP (Properties)
(photorefractive effect in photoconductive system of)

L4 ANSWER 20 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:662967 CAPLUS <<LOGINID::20060727>>
DN 117:262967
ED Entered STN: 26 Dec 1992

TI Encoder having an atomic- or molecular-structure reference scale, and a scale member for it
IN Nose, Hiroyasu; Kawase, Toshimitsu; Miyazaki, Tohsihiko; Oguchi, Takahiro; Yamano, Akihiko
PA Canon K. K., Japan
SO U.S., 14 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM G01N027-00
INCL 324071100
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 73, 75
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5150035	A	19920922	US 1990-515872	19900427
EP 403766	B1	19950315	EP 1990-107928	19900426
R: BE, CH, DE, FR, GB, IT, LI, NL, SE				
PRAI JP 1989-105889	A	19890427		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5150035	ICM	G01N027-00
	INCL	324071100
	IPCI	G01N0027-00 [ICM,5]
	IPCR	G01B0007-28 [I,A]; G01B0007-28 [I,C*]
	NCL	324/071.100; 250/306.000; 349/135.000; 349/187.000; 977/851.000; 977/872.000
EP 403766	IPCI	G01B0007-28 [ICM,5]; G01B0015-04 [ICS,5]; G01B0015-00 [ICS,5,C*]; G01N0027-00 [ICS,5]; G11B0009-00 [ICS,5]
	ECLA	G01B007/28; G01N027/00F

AB The encoder, esp. for position detn. in semiconductor device manuf., has a ref. scale having a periodic structure of atoms or mols. in a predetd. direction; a probe having a tip facing the ref. scale, which detects the structural variation of the periodic structure; and a means for detecting the amt. of relative displacement between the ref. scale and the probe along the predetd. direction from the structural variation information obtained by the probe: the ref. scale is provided with a substantially continuous at. or mol. structure in which structural variations are substantially not detected in a direction orthogonal to the predetd. direction. The ref. scale may be a mol. oriented film of a liq. crystal or a cyanine, xanthine, or ***squarylium*** dye, or alternating layers of ***different*** compd. semiconductors.
ST encoder atomic mol ref scale; position detn encoder; liq crystal ref scale encoder; dye mol ref scale encoder; compd semiconductor multilayer ref scale encoder
IT Semiconductor devices
(encoder for position detn. in manuf. of, having at.- or mol.-structure ref. scale)
IT Dyes, cyanine
(ref. scales from, in encoders for position detn.)
IT Dyes
(***squarylium*** , ref. scales from, in encoders for position detn.)
IT Liquid crystals
(smectic, ref. scales from, in encoders for position detn.)
IT 1303-00-0, Gallium arsenide, uses 22398-80-7, Indium phosphide, uses 37382-15-3, Aluminum gallium arsenide ((***Al*** ,Ga)As) 106070-22-8, Aluminum gallium indium arsenide ((***Al*** ,Ga,In)As) 106070-25-1, Gallium indium arsenide
RL: USES (Uses)
(ref. scales contg. layers of, in encoders for position detn.)
IT 52709-84-9, 4-Cyano-4'-n-octylbiphenyl
RL: USES (Uses)
(ref. scales from, in encoders for position detn.)

L4 ANSWER 21 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:15621 CAPLUS <<LOGINID::20060727>>
DN 114:15621
ED Entered STN: 12 Jan 1991
TI Electrical properties of gold/polyimide/ ***squarylium*** -arachidic

acid junctions fabricated by the Langmuir-Blodgett technique
AU Iwamoto, Mitsumasa; Shidoh, Shunichi
CS Dep. Electr. Electron. Eng., Tokyo Inst. Technol., Tokyo, 152, Japan
SO Japanese Journal of Applied Physics, Part 1: Regular Papers, Short Notes & Review Papers (1990), 29(10), 2031-7
CODEN: JAPNDE; ISSN: 0021-4922
DT Journal
LA English
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 66
AB ***Metal*** -insulator-semiconductor (MIS) junction was fabricated having the structure of a Au-polyimide (PI)/ ***squarylium*** dye-arachidic acid (SQ-C20) ***mixed*** system by the Langmuir-Blodgett (LB) technique. A PI LB film becomes a good elec. insulator even when the no. of deposited layers is 5. From the capacitance-voltage (C-V) measurements, it was found that a (SQ-C20) multilayered film is depleted at the interface between the PI layer and the (SQ-C20) layer even when biasing voltage was zero millivolt because pos. excess charges are displaced from the gate-Au electrode to the PI layer as deposited. The polyimide layer incorporated in the junctions makes a significant contribution to the elec. conduction, and asym. current-voltage (I-V) characteristics were obtained for the junctions.
ST gold polyimide squaryllium arachidic LB junction; polyimide MIS junction LB fabrication; squaryllium arachidic acid MIS LB fabrication
IT Polyimides, uses and miscellaneous
RL: USES (Uses)
(MIS from squaryllium-arachidic acid with overlayer of, and gold overlayer, Langmuir-Blodgett method of fabrication of)
IT Diodes
(MIS, gold/polyimide/squaryllium-arachidic acid, Langmuir-Blodgett technique for)
IT 43134-09-4
RL: USES (Uses)
(MIS fabrication from gold polyimide and layer of arachidic acid with, Langmuir-Blodgett technique for)
IT 506-30-9, Arachidic acid
RL: USES (Uses)
(MIS junction fabrication from gold overlayer on polyimide on squaryllium mixt. with, Languir-Blodgett technique for)
IT 7440-57-5, Gold, uses and miscellaneous
RL: USES (Uses)
(MIS junction of polyimide on squaryllium-arachidic acid with overlayer of, Langmuir-Blodgett technique for)

L4 ANSWER 22 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:12635 CAPLUS <<LOGINID::20060727>>
DN 114:12635
ED Entered STN: 12 Jan 1991
TI Preparations of highly functional Langmuir-Blodgett films
AU Kawabata, Yasujiro
CS Natl. Chem. Lab. Ind., Tsaskuba, 305, Japan
SO Nippon Kagaku Kaishi (1990), (10), 1087-95
CODEN: NKAKB8; ISSN: 0369-4577
DT Journal
LA Japanese
CC 66-1 (Surface Chemistry and Colloids)
Section cross-reference(s): 28, 38, 74, 76
AB Amphiphilic compds. were synthesized for the fabrication of LB films with new functions and unique structures. ***Mixed*** layers of ***squarylium*** dye and fatty acid form supermonomol. structures where the monolayers or multilayers of the pure dye exist below the monolayer of the fatty acid at the air-water interface. 0Ong-chain derivs. of cyclodextrin form monolayers and are used for constructing host-guest LB films. These host-guest LB films show remarkable photochem. reactivity and mol. recognition ability. Amphiphilic compds. having charge-transfer ***complex*** moieties were synthesized and their elec. conds. were studied. The ***metal*** (dmit)2 derivs. formed charge-transfer ***complexes*** with long-chain ammonium ions. The LB films were obtained with these ***complexes*** , which showed high conds. with metallic temp. dependences. The hydrophobic part of an amphiphilic charge-transfer ***complex*** was functionalized by introducing a switching unit (azobenzene) which perceives an external stimulus such as

light and heat, causing a change in the cond. of the LB film.
ST Langmuir Blodgett film elec cond; ***squarylium*** dye fatty acid supramol structure; cyclodextrin host guest LB film; photochem host guest LB film; recognition mol host guest LB film; charge transfer ***complex*** LB film; switching elec photo LB film; azobenzene amphiphile LB film switching
IT Surface pressure
(-area isotherms, of amphiphilic dyes, Langmuir-Blodgett films in relation to)
IT Surface area
(-pressure isotherms, of amphiphilic dyes, Langmuir-Blodgett films in relation to)
IT Fatty acids, uses and miscellaneous
RL: USES (Uses)
(Langmuir-Blodgett films)
IT Charge-transfer ***complexes***
Inclusion compounds
RL: USES (Uses)
(Langmuir-Blodgett films contg.)
IT Dyes
(***squarylium*** , Langmuir-Blodgett films contg.)
IT Films
(Langmuir-Blodgett, prepn. of highly functionalized)
IT Electric conductors
(Langmuir-Blodgett film)
IT 1562-93-2D, inclusion compds. with cyclodextrins 6268-49-1D, inclusion compds. with cyclodextrins 12619-70-4D, Cyclodextrin, derivs., inclusion compds. 106323-22-2D, inclusion compds. with azobenzenes 106335-65-3D, inclusion compds. with azobenzenes 106335-69-7D, inclusion compds. with azobenzenes 110577-03-2D, inclusion compds. with azobenzenes
RL: USES (Uses)
(Langmuir-Blodgett films contg.)
IT 96189-28-5 101853-37-6 102149-36-0 117654-57-6
RL: USES (Uses)
(Langmuir-Blodgett films contg., elec. cond. of)
IT 506-30-9, Arachidic acid
RL: PRP (Properties)
(Langmuir-Blodgett films formed from ***squarylium*** dyes and)
IT 97521-39-6P 98987-51-0P 98987-52-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for Langmuir-Blodgett film applications)
IT 2892-51-5, Squaric acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with indolium derivs.)
IT 34157-19-2 34157-23-8 34228-39-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with squaric acid)
IT 34344-25-7 117191-82-9 117204-99-6
RL: PRP (Properties)
(surface pressure-area isotherms for)

L4 ANSWER 23 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1990:242890 CAPLUS <<LOGINID::20060727>>
DN 112:242890
ED Entered STN: 23 Jun 1990
TI ***Squaraine*** chemistry: application of fluorescence spectroscopy in modeling molecular interactions between ***squaraine*** particles and poly(vinyl butyral) in xerographic devices
AU Law, Kock Yee
CS Webster Res. Cent., Xerox, Webster, NY, 14580, USA
SO Journal of Imaging Science (1990), 34(2), 38-44
CODEN: JISCEJ; ISSN: 8750-9237
DT Journal
LA English
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
AB The mol. interactions between photoactive ***squaraine*** particles of bis(4-dimethylaminophenyl) ***squaraine*** (HSq) and poly(vinyl butyral) (PVB) in solns. and in thin films in xerog. devices were modeling by studying the fluorescence emission of HSq in solns. (THF, MeCOEt, methylene chloride and EtOH) of PVB. Results reveal that the hydroxy groups in PVB form ***complexes*** with HSq at the particle surface.

As a result of this ***complexation*** process, PVB polymer phys. adsorbs onto the surfaces of HSq particles, resulting in a steric stabilization of HSq particles and, consequently, stable dispersions of HSq and PVB in various solvents. Although solvent does have an effect on the polymer adsorption process, the effects on the dispersion stability and on the steric stabilization process are relatively small. On the other hand, a strong solvent effect on the xerog. properties was obsd. when HSq/PVB dispersions prepd. from various solvents were used to fabricate ***squaraine*** charge generation layers (CGLs) in bilayer xerog. devices. Since the geometry and the chem. compn. of all devices tested were identical, the variations in xerog. properties suggest that the detailed interactions between HSq particles and PVB in the CGLs are ***different*** and are sensitive to the dispersing solvent. Making the assumption that any variations of interactions between HSq particles and PVB originate from the HSq/PVB dispersion (owing to the fast solvent evapn. in the solvent coating process), various particle-particle and particle-polymer interactions were studied qual. by shear viscosity measurements. The data from shear viscosity measurements correlate with the variation in xerog. properties. The important effect of the state of mol. interactions between HSq particles and PVB in the CGL on the xerog. properties of various HSq bilayer xerog. devices is discussed.

ST electrophotog photoreceptor ***squaraine*** polyvinyl butyral

IT Electrophotographic photoconductors
(composite, mol. interaction between ***squaraine*** particles and poly(vinyl butyral) in layer of)

IT Vinyl acetal polymers
RL: PRP (Properties)
(butyrals, interaction of, with ***squaraine*** compd. in electrophotog. photoreceptor layer)

IT 43134-09-4, Bis(4-dimethylaminophenyl) ***squaraine***
RL: PROC (Process)
(interactions of, with poly(vinyl butyral) in electrophotog. photoreceptor layer)

L4 ANSWER 24 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1989:622083 CAPLUS <<LOGINID::20060727>>
DN 111:222083
ED Entered STN: 09 Dec 1989
TI Electrophotographic photoconductor containing ***squarylium*** compound charge-generating agent
IN Kuroda, Masami; Hattori, Yoshimasa; Furusho, Noboru; Sugata, Yoshinobu
PA Fuji Electric Co., Ltd., Japan
SO Ger. Offen., 20 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM G03G005-06
ICS C07D333-04; C07D413-06; C07D417-06; C07D421-06; C07D409-06
ICI C07D293-12, C07D277-64, C07D263-56, C07D209-12
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3842253	A1	19890629	DE 1988-3842253	19881215
	DE 3842253	C2	19950810		
	JP 01159663	A2	19890622	JP 1987-317768	19871216
	JP 01273051	A2	19891031	JP 1988-103678	19880426
PRAI	JP 1987-317768	A	19871216		
	JP 1988-103678	A	19880426		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 3842253	ICM	G03G005-06
	ICS	C07D333-04; C07D413-06; C07D417-06; C07D421-06; C07D409-06
	ICI	C07D293-12, C07D277-64, C07D263-56, C07D209-12
	IPCI	G03G0005-06 [ICM,4]; C07D0333-04 [ICS,4]; C07D0333-00 [ICS,4,C*]; C07D0413-06 [ICS,4]; C07D0413-00 [ICS,4,C*]; C07D0417-06 [ICS,4]; C07D0417-00 [ICS,4,C*]; C07D0421-06 [ICS,4]; C07D0421-00 [ICS,4,C*]; C07D0409-06 [ICS,4]; C07D0409-00

[ICS,4,C*]; C07D0293-12 [ICI,4]; C07D0293-00
[ICI,4,C*]; C07D0277-64 [ICI,4]; C07D0277-00
[ICI,4,C*]; C07D0263-56 [ICI,4]; C07D0263-00
[ICI,4,C*]; C07D0209-12 [ICI,4]; C07D0209-00 [ICI,4,C*]
IPCR C07D0333-00 [I,C*]; C07D0333-20 [I,A]; C07D0409-00
[I,C*]; C07D0409-14 [I,A]; C07D0413-00 [I,C*];
C07D0413-14 [I,A]; C07D0417-00 [I,C*]; C07D0417-14
[I,A]; G03G0005-06 [I,A]; G03G0005-06 [I,C*]
ECLA C07D333/20; C07D409/14+333B+333B+209C+209C;
C07D413/14+333B+333B+263B+263B;
C07D417/14+333B+333B277B+277B; G03G005/06B4B;
G03G005/06D4D
JP 01159663 IPCI G03G0005-06 [ICM,4]; C09B0057-00 [ICS,4]
JP 01273051 IPCI G03G0005-06 [ICM,4]
OS MARPAT 111:222083
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Electrophotog. photoreceptors having a high sensitivity and excellent characteristics in repeated use contain a ***squarylium*** compd. of the formula I, II, or III (R1-R6 = H, halogen, alkyl, aryl, or NO2; R7, R8 = H or OH; R9, R10 = H, halogen, alkoxy, alkyl, NO2, or (un)substituted aryl; X = O, S, Se, or Me2C) as a charge-generating agent. Thus, an ***Al*** -coated PET film support was overcoated with a mixt. (***mixed*** for 3 h) contg. IV, Vylon 200 (polyester), 1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)-2-pyrazolone, and THF, and dried to give a photoreceptor have excellent sensitivity (E1/2 = 7.3 lx-s).
ST ***squarylium*** compd charge generator electrophotog
IT Electrophotographic photoconductors
(contg. ***squarylium*** compd. charge-generating agents, for improved sensitivity)
IT Onium compounds
RL: USES (Uses)
(***squarylium*** , as charge-generating agents in electrophotog. photoconductors)
IT 123702-54-5 123702-55-6 123702-56-7 123702-57-8 123702-58-9
123702-59-0 123702-60-3 123702-61-4 123702-62-5 123702-63-6
123702-64-7 123702-65-8 123702-66-9 123702-67-0 123702-68-1
123702-69-2 123702-70-5 123702-71-6 123702-72-7 123702-73-8
123702-74-9 123702-75-0 123702-76-1 123702-77-2 123702-78-3
123702-79-4 123702-80-7 123702-81-8 123702-82-9 123702-83-0
123702-84-1 123702-85-2 123702-86-3 123702-87-4 123702-88-5
123702-89-6 123702-90-9 123702-91-0 123702-92-1 123728-03-0
123728-04-1 123728-05-2 123728-06-3 123728-07-4 123728-08-5
123728-09-6 123728-10-9 123728-11-0 123728-12-1 123728-13-2
123728-14-3 123728-15-4 123728-16-5 123728-17-6 123728-18-7
123728-19-8 123755-24-8 123755-25-9 123755-26-0 123755-27-1
RL: USES (Uses)
(electrophotog. photoreceptor contg. charge-generating agent from, with improved sensitivity)

L4 ANSWER 25 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1989:456919 CAPLUS <<LOGINID::20060727>>
DN 111:56919
ED Entered STN: 20 Aug 1989
TI ***Squaraine*** chemistry. A study of the solute-solvent ***complexation*** of ***squaraine*** in solvents by proton NMR spectroscopy
AU Law, Kock Yee
CS Webster Res. Cent., Xerox, Webster, NY, 14580, USA
SO Journal of Physical Chemistry (1989), 93(15), 5925-30
CODEN: JPCHAX; ISSN: 0022-3654
DT Journal
LA English
CC 22-10 (Physical Organic Chemistry)
AB The solute-solvent ***complexation*** process of ***squaraine*** in org. solvents has been studied by proton NMR spectroscopy using the

model compd. bis[(4-dibutylamino)phenyl] ***squaraine*** (I). Two doublets of coupling const. of .apprx.9.5 Hz are obsd. for the arom. protons of I and the difference in chem. shift (.delta..alpha.-.delta..beta.) between them is found to be sensitive to solvent. The solvent effect on .delta..alpha.-.delta..beta. correlates not only with the solvent parameter .pi.*, but also with the absorption max. (.lambda.max) and the fluorescence quantum yield (.phi.f) of I. Since the general bathochromic effect of .pi.* on the .lambda.max and the variation of the .phi.f of I in ***different*** solvents are shown to be a result of the shift in equil. of the solute-solvent ***complexation*** process (equil. const. for the ***complex*** formation increases as .pi.* increases), the correlation of the NMR spectral data with parallel electronic spectral data implies that the variation of .delta..alpha.-.delta..beta. also originates from the solute-solvent ***complexation*** process. Because the .phi.f of I is shown to be dependent on the planarity of the ***squaraine*** structure, the correlation between .delta..alpha.-.delta.B and the .phi.f of I suggests that there is a conformational change in the ***squaraine*** structure assocd. with the ***complexation*** process; e.g., the ***squaraine*** structure becomes increasingly nonplanar as the solute-solvent assocn. increases. This model is supported by the specific solvation effects obsd. in chlorinated and arom. solvents and by variable-temp. NMR spectra data.

ST ***squaraine*** NMR solvent effect; solvation ***squaraine*** ; conformation ***squaraine***

IT Conformation and Conformers
Nuclear magnetic resonance
(of ***squaraine*** derivs.)

IT Solvation
(of ***squaraine*** derivs., NMR in relation to)

IT Solvent effect
(on NMR spectra of ***squaraine*** derivs.)

IT 2826-28-0 121289-35-8 121289-36-9 121289-37-0 121314-06-5
RL: PRP (Properties)
(NMR spectrum of, solvent effect on)

L4 ANSWER 26 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1987:616972 CAPLUS <<LOGINID::20060727>>
DN 107:216972
ED Entered STN: 12 Dec 1987
TI ***Squaraine*** chemistry: effects of structural changes on the absorption and multiple fluorescence emission of bis[4-(dimethylamino)phenyl] ***squaraine*** and its derivatives
AU Law, Kock Yee
CS Xerox Corp., Webster, NY, 14580, USA
SO Journal of Physical Chemistry (1987), 91(20), 5184-93
CODEN: JPCHAX; ISSN: 0022-3654
DT Journal
LA English
CC 22-9 (Physical Organic Chemistry)
Section cross-reference(s): 74
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The UV and steady state fluorescence of the donor-acceptor-donor (D-A-D) bis[4-(dimethylamino)phenyl] ***squaraine*** (I; R = Me, R1 = H), I (R = Et, Pr, Bu, C18H37; R1 = H, Me, MeO, OH, F, Et), or the analogs II, III, or IV were examd. All substituents on I (R = R1 = H) exert bathochromic effects in soln. which originate from solute-solvent ***complexes*** whose formation consts. increase with the D-A-D charge transfer character of I. I have strong red absorptions in soln. and are panchromatic in the solid. Temp. and solvent effects, in ***mixed*** solvent systems, on the fluorescence show that the obsd. multiple emission bands (identified from their stokes shifts) arise from 3 excited states: the free singlet state, the solvent ***complexed*** singlet state, and a twisted excited singlet state which is formed, in the radiationless decay (via rotational relaxation), from the other 2 singlets.

ST UV ***squaraine*** substituent effect; fluorescence ***squaraine***

solvent effect; methylaminophenylsquaraine
IT Conformation and Conformers
(of bis(dialkylaminophenyl) ***squaraines*** in excited states)
IT Fluorescence
Ultraviolet and visible spectra
(of ***squaraines*** , solvent effects on)
IT Substituent effect
(on UV and fluorescence of ***squaraines***)
IT Energy level excitation
(charge-transfer, of bis(dialkylaminophenyl) ***squaraines***)
IT Energy level excitation
Energy level transition
(electronic, of bis(dialkylaminophenyl) ***squaraines***)
IT Charge-transfer ***complexes***
RL: PRP (Properties)
(intramol., of bis(dialkylaminophenyl) ***squaraines***)
IT Energy level transition
(nonradiative, of bis(dialkylaminophenyl) ***squaraines***)
IT 43134-09-4 63842-82-0 63842-83-1 68842-56-8 68842-66-0
72907-70-1 82930-30-1 87286-91-7 98125-61-2 99663-97-5
102128-66-5 105810-36-4 105810-37-5 105810-38-6 105810-39-7
105856-84-6 109976-92-3 109976-93-4 109976-95-6
RL: PRP (Properties)
(fluorescence and UV of, solvent effects on)

L4 ANSWER 27 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:543552 CAPLUS <<LOGINID::20060727>>
DN 105:143552
ED Entered STN: 18 Oct 1986
TI ***Squarylium*** dyes
IN Niigae, Ryuichi; Murakami, Yoshinobu; Hisada, Hitoshi
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09B057-00
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61073770	A2	19860415	JP 1984-196033	19840919
	JP 05048262	B4	19930721		
PRAI	JP 1984-196033		19840919		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 61073770	ICM	C09B057-00
	IPCI	C09B0057-00 [ICM,4]
	IPCR	C09B0057-00 [I,A]; C09B0057-00 [I,C*]

OS CASREACT 105:143552
GI

/ Structure 8 in file .gra /

AB ***Squarylium*** dyes of the formula I (R = H, C.ltoreq.4 alkyl), useful as charge carrier-generating substances in electrophotog. photoreceptors, are obtained by reacting II (R = H, C.ltoreq.4 alkyl) with 3,4-dihydroxy-3-cyclobutene-1,2-dione (III) in the presence of polyphosphoric acid. Thus, polyphosphoric acid 180, III 1.1, and N-ethylcarbazole 2.9 g were ***mixed*** and stirred to obtain 1.5 g I (R = Et), 1 part of which ***mixed*** with 1 part Eslec BH-1 [poly(vinyl butyral)] and 32 parts iso-PrOH to obtain a dispersion. This dispersion was coated on a Metalumy (***Al*** -evapd. PET) film and dried at 80.degree. for 1 h to form a 0.5-.mu.-thick charge carrier-generating layer, which was over-coated with a soln. contg. I (R =

Et) 1, Panlite K 1300 1, and THF 10 parts and dried at 100.degree. for 1 h to form a 10-.mu.-thick charge carrier-transport layer. The resulting electrophotog. material, when used in an electrostatic copier, showed a high sensitivity.

ST ***squarylium*** dye charge generator electrophotog; ethylcarbazole hydroxycyclobutenedione ***squarylium*** dye; electrophotog photoconductor charge generating dye

IT Polyphosphoric acids
RL: PREP (Preparation)
(***squarylium*** dye prepn. in presence of)

IT Photography, electro-, photoconductors
Photography, electro-, plates
(with charge carrier-generating layer from ***squarylium*** dye)

IT 104446-17-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and use of, as charge carrier-generator in electrophotog. photoreceptor)

IT 86-28-2 2892-51-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of)

L4 ANSWER 28 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:432930 CAPLUS <<LOGINID::20060727>>
DN 105:32930
ED Entered STN: 26 Jul 1986
TI Electrophotographic photosensitive materials
IN Kin, Ishi; Tanaka, Hiroyuki; Fu, Ryujun
PA Fuji Xerox Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-06
ICS G03G005-04
ICA H01L031-08
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60258550	A2	19851220	JP 1984-92762	19840511
	JP 03042660	B4	19910627		
PRAI	JP 1984-92762		19840511		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60258550	ICM	G03G005-06
	ICS	G03G005-04
	ICA	H01L031-08
	IPCI	G03G0005-06 [ICM,4]; G03G0005-04 [ICS,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]

GI

/ Structure 9 in file .gra /

AB The photosensitive layers of the title materials contain I (R = C2-6 linear alkyl). The materials show high sensitivity. Thus, I (R = Et) was dispersed together with CH2Cl2 and steel balls for 12 h, ***mixed*** with Vylon 200 (polyester), coated on an ***Al*** plate to form a 0.5-.mu. charge-generating layer, and overcoatyed with Panlite (polycarbonate) contg. 50% 1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)pyrazoline to form a 15-.mu. charge-transfer layer. The resulting material was corona charged (-6 kV; 2 s), kept in the dark for 2 s, and irradiated with a W lamp at 10 lx, showing initial surface voltage 850 V and E1/2 (voltage-halving exposure) 1.5 lx-s.

ST electrophotog photoconductor high sensitivity; ***squarylium*** compd electrophotog sensitive material

IT Photography, electro-, photoconductors
(contg. ***squarylium*** compd. with improved sensitivity)

IT 102128-67-6 102149-21-3 102773-56-8 102792-69-8
RL: USES (Uses)
(electrophotog. photosensitive material contg., for improved sensitivity)

L4 ANSWER 29 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:234271 CAPLUS <<LOGINID::20060727>>
DN 104:234271
ED Entered STN: 27 Jun 1986
TI Electrophotographic organic photosensitive materials
IN Tanaka, Hiroyuki; Kin, Ishi; Saeki, Satoru; Fu, Ryujun; Torigoe, Kaoru
PA Fuji Xerox Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-04
ICS H01L031-08
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 60258547	A2	19851220	JP 1984-104780	19840525
JP 02054940	B4	19901126		
PRAI JP 1984-104780		19840525		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60258547	ICM	G03G005-04
	ICS	H01L031-08
	IPCI	G03G0005-04 [ICM,4]; H01L0031-08 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]

GI

/ Structure 10 in file .gra /

AB The title materials contain a conductive support laminated with org. photosensitive layers comprising a charge-generating layer contg. I (R = halo, Me, MeO, NO2, CN, CO2H, ethoxycarbonyl; R1 = H, OH, Me; n = 0-5) and a charge-transfer layer contg. II (R2 = Me, Cl). The materials show high sensitivity. Thus, 3,4-dihydroxy-3-cyclobutene-1,2-dione0.76, N-benzyl-N-methylaniline 2.48 g, and BuOH 26.8 mL were ***mixed*** and stirred at 110.degree. for 4 h to obtain I (R1 = H; n = 0), 1 part of which was ***mixed*** with Polyester 49000 1 and CH2Cl2 10 parts, pulverized in a ball mill for 4 h, coated on an ***Al*** -evapd. polyester film (Metalmy), and dried at 70.degree. for 5 h to form a 1-.mu.-thick charge-generating layer. On this layer, a soln. contg. N, N'-diphenyl-N, N'-bis(3-methylphenyl)-[1,1'-diphenyl]-4,4'-diamine 1, Panlite 1, and CH2Cl2 10 parts was coated and dried at 70.degree. for 16 h to form a 22-.mu.-thick charge-transfer layer. The resulting material was corona-charged (-6 kV) and irradiated with a W lamp at 10 lx, showing initial voltage -1150 V, voltage after standing in the dark for 2 s -1140 V, E1/2 (voltage-halving exposure) 2.1 l-s, and residual voltage 0 V.
ST electrophotog org photosensitive material; ***squarylium*** compd electrophotog photoconductor; diphenyldiamine deriv electrophotog photosensitive material
IT Photography, electro-, photoconductors
(with charge-generating layer contg. ***squarylium*** compd. with improved performance)
IT 614-30-2 2892-51-5 101462-78-6
RL: USES (Uses)
(electrophotog. org. photosensitive material with charge-generating layer contg., with improved performance)
IT 101462-70-8 101462-73-1 101462-79-7 101462-80-0 102128-62-1 102128-63-2 102395-00-6 102395-01-7
RL: USES (Uses)
(electrophotog. photoconductor with charge-generating layer contg.)
IT 65181-78-4
RL: USES (Uses)

(electrophotog. photoconductor with charge-generating layer contg. saquarylium compd. and charge-transfer layer contg.)

L4 ANSWER 30 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:216488 CAPLUS <<LOGINID::20060727>>
DN 104:216488
ED Entered STN: 14 Jun 1986
TI Electrophotographic organic sensitive materials
IN Kin, Ishi; Tanaka, Hiroyuki; Saeki, Satoru; Torigoe, Kaoru; Fu, Ryujun
PA Fuji Xerox Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-04
ICA H01L031-08
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60258548	A2	19851220	JP 1984-104782	19840525
	JP 02054942	B4	19901126		
PRAI	JP 1984-104782		19840525		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60258548	ICM	G03G005-04
	ICA	H01L031-08
	IPCI	G03G0005-04 [ICM,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]

GI

/ Structure 11 in file .gra /

AB The electrophotog. materials include charge-generating layers contg. I (R = halo, Me, MeO, NO2, CN, CO2H, ethoxycarbonyl; n = 0-5; R1 = H, OH, Me) and charge-transport layers contg. R3NR4-p-C6H4CH:NNR2Ph (II; R2 = Me, Ph, benzyl; R3, R4 = Me, Et). Thus, 0.76 g 3,4-dihydroxy-3-cyclobutene-1,2-dione, 2.48 g N-benzyl-N-methylaniline, and 26.8 mL BuOH were ***mixed*** and stirred at 110.degree. for 4 h to obtain I (n = 0; R1 = H), 1 part of which was ***mixed*** with 1 part Polyester 49000 and 10 parts THF, pulverized in a ball mill for 4 h, coated on a ***Al*** -evapd. polyester film (Metalmy), dried at 70.degree. for 5 h to form a 1-.mu.-thick charge-generating layer. On this layer, a soln. contg. II (R2 = Ph; R3, R4 = Me) 1, Panlite 1, and THF 10 parts was coated, and dried at 70.degree. for 16 h to form a 22-.mu.-thick photosensitive material with a charge-transport layer. The resulting material was corona charged (-6 kV; 2 s) and irradiated with a W lamp at 10 lx, and showed initial voltage -1180 V, voltage after standing in the dark for 2 s -1140 V, E1/2 (voltage-halving exposure) 1.9 lx-s, and residual voltage (after 10 s irradn.) 0 V.
ST electrophotog photoconductor hydrazone ***squarylium*** dye; ***squarylium*** dye electrophotog photoreceptor; hydrazone compd electrophotog photoreceptor
IT Photography, electro-, photoconductors
(multilayer, with charge-generating layer contg. ***squarylium*** dye and charge-transport layer contg. hydrazone deriv.)
IT 59670-38-1 71135-02-9
RL: USES (Uses)
(electrophotog. photoconductor with charge-generating layer contg. ***squarylium*** dye and charge-transport layer contg.)
IT 101462-67-3 101462-68-4 101462-73-1 101462-78-6 101462-79-7 101462-80-0 101539-83-7 102128-63-2
RL: USES (Uses)
(electrophotog. photoconductor with charge-generating layer contg., and charge-transport layer contg. hydrazone deriv.)

L4 ANSWER 31 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:216487 CAPLUS <<LOGINID::20060727>>

DN 104:216487
ED Entered STN: 14 Jun 1986
TI Electrophotographic sensitive materials
IN Kin, Ishi; Tanaka, Hiroyuki; Fu, Ryujun
PA Fuji Xerox Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
    CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-06
    ICS G03G005-04
ICA H01L031-08
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
    Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60258551	A2	19851220	JP 1984-92763	19840511
	JP 03042661	B4	19910627		
PRAI	JP 1984-92763		19840511		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60258551	ICM	G03G005-06
	ICS	G03G005-04
	ICA	H01L031-08
	IPCI	G03G0005-06 [ICM,4]; G03G0005-04 [ICS,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]; G03G0005-07 [I,A]; G03G0005-07 [I,C*]

GI

/ Structure 12 in file .gra /

AB The electrophotog. materials have photosensitive layers contg. I (R = C2-6 linear alkyl). The materials show high sensitivity. Thus, I (R = Et) was pulverized together with CH2Cl2 and steel balls for 12 h, ***mixed*** with Vylon 200, and coated on an ***Al*** plate by .apprx.0.5 .mu. to form a charge-generating layer, on which Panlite contg. 50% 1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)-pyrazoline was coated by .apprx.15 .mu. to form a charge-transport layer. The resulting material was corona charged (-6 kV; 2 s), kept in the dark for 2 s, and irradiated with a W lamp at 10 lx, showing initial surface voltage 820 V and E1/2 (voltage-halving exposure) 3.2 lx-s.
ST ***squarylium*** dye electrophotog photoconductor
IT Photography, electro-, photoconductors
      (***squarylium*** dyes as charge-generating agents for)
IT 102128-65-4 102128-66-5 102149-19-9 102149-20-2
    RL: USES (Uses)
      (electrophotog. photoconductor with charge-generating layer contg.)
IT 53332-49-3
    RL: USES (Uses)
      (electrophotog. photoconductor with charge-transport layer contg., and charge-generating layer contg. ***squarylium*** dye)

L4 ANSWER 32 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:216486 CAPLUS <<LOGINID::20060727>>
DN 104:216486
ED Entered STN: 14 Jun 1986
TI Electrophotographic sensitive materials
IN Kin, Ishi; Tanaka, Hiroyuki; Saeki, Satoru; Torigoe, Kaoru; Fu, Ryujun
PA Fuji Xerox Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
    CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-06
    ICS G03G005-04
ICA H01L031-08
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other

Reprographic Processes)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60258552	A2	19851220	JP 1984-92764	19840511
	JP 03042662	B4	19910627		
	US 4626485	A	19861202	US 1985-733165	19850513
PRAI	JP 1984-92764	A	19840511		
	JP 1984-104776	A	19840525		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60258552	ICM	G03G005-06
	ICS	G03G005-04
	ICA	H01L031-08
	IPCI	G03G0005-06 [ICM,4]; G03G0005-04 [ICS,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
US 4626485	IPCI	G03G0005-06 [ICM,4]; G03G0005-14 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
	NCL	430/058.250; 430/058.300; 430/058.500; 430/058.550; 430/058.800; 430/073.000; 564/307.000

GI

/ Structure 13 in file .gra /

AB The electrophotog. materials have photosensitive layers contg. I (R = H, F, Cl, Br, NO2, CN). The materials show high sensitivity. Thus I (R = H) was pulverized together with CH2Cl2 and steel balls for 12 h, ***mixed*** with Vylon 200, and coated on an ***Al*** plate by .apprx.0.5 .mu. to form a charge-generating layer, on which Panlite contg. 50% 1-phenyl-3-(p-diethylaminostyrl)-5-(p-diethylaminophenyl)-pyrazoline was coated by .apprx.15 .mu. to form a charge-transport layer. The resulting material was corona charged (.apprx.6 kV; 2 s), kept in the dark for 2 s, and irradiated with a W lamp at 10 lx, and showed initial surface voltage 820 V and E1/2 (voltage-halving exposure) 2.2 lx-s.

ST ***squarylium*** dye electrophotog photoconductor

IT Photography, electro-, photoconductors
(multilayer, ***squarylium*** dyes charge-generating agents for)

IT 101462-72-0 101462-73-1 101526-45-8 102128-63-2 102128-64-3 102149-18-8
RL: TEM (Technical or engineered material use); USES (Uses)
(electrophotog. charge-generating agent)

IT 53332-49-3
RL: USES (Uses)
(electrophotog. photoreceptor with charge-transport layer contg., ***squarylium*** dyes as charge-generating agents for)

L4 ANSWER 33 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:216485 CAPLUS <<LOGINID::20060727>>
DN 104:216485
ED Entered STN: 14 Jun 1986
TI Electrophotographic sensitive materials
IN Kin, Ishi; Tanaka, Hiroyuki; Saeki, Satoru; Torigoe, Kaoru; Fu, Ryujun
PA Fuji Xerox Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-06
ICS G03G005-04
ICA H01L031-08
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60258553	A2	19851220	JP 1984-92765	19840511
	US 5055615	A	19911008	US 1988-233101	19880817
PRAI	JP 1984-92765	A	19840511		

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     JP 1984-92770          A     19840511
     US 1985-733166         B1    19850513
     US 1987-26598          B3    19870317
CLASS
 PATENT NO.      CLASS  PATENT FAMILY CLASSIFICATION CODES
 --------------  -----  ----------------------------------------------
 JP 60258553     ICM    G03G005-06
                 ICS    G03G005-04
                 ICA    H01L031-08
                 IPCI   G03G0005-06 [ICM,4]; G03G0005-04 [ICS,4]; H01L0031-08
                        [ICA,4]
                 IPCR   G03G0005-06 [I,A]; G03G0005-06 [I,C*]
 US 5055615      IPCI   C07C0085-00 [ICM,4]
                 IPCR   C07C0211-00 [I,C*]; C07C0211-50 [I,A]; C07C0229-00
                        [I,C*]; C07C0229-42 [I,A]; C07C0255-00 [I,C*];
                        C07C0255-58 [I,A]; G03G0005-06 [I,A]; G03G0005-06
                        [I,C*]
                 NCL    564/307.000; 430/074.000; 558/416.000; 558/418.000;
                        558/419.000; 560/045.000; 562/457.000
GI


/ Structure 14 in file .gra /


AB   The electrophotog. materials have photosensitive layers contg. I (R = NO2,
     CN). The materials show high sensitivity. Thus, I (R = NO2) was
     pulverized together with CH2Cl2 and steel balls for 12 h,   ***mixed***
     with Vylon 200, and coated on an   ***Al***   plate by .apprx.0.5 .mu. to
     form a charge-generating layer, on which Panlite contg. 50%
     1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)-pyrazoline was
     coated by .apprx.15 .mu. to form a charge-transport layer. The resulting
     material was corona charged (-6 kV; 2 s), kept in the dark for 2 s, and
     irradiated with a W lamp at 10 lx, and showed initial surface voltage 850
     V and E1/2 (voltage-halving exposure) 1.5 lx-s.
ST     ***squarylium***   dye electrophotog photoconductor
IT   Photography, electro-, photoconductors
        (multilayer, with   ***squarylium***   dye in charge-generating layer)
IT   102128-61-0   102128-62-1
     RL: USES (Uses)
        (electrophotog. photoconductor with charge-generating layer contg.)
IT   53332-49-3
     RL: USES (Uses)
        (electrophotog. photoconductor with charge-transport layer contg., and
        charge-generating layer contg.   ***squarylium***   dye)

L4   ANSWER 34 OF 37  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   1986:216484  CAPLUS <<LOGINID::20060727>>
DN   104:216484
ED   Entered STN:  14 Jun 1986
TI   Electrophotographic sensitive materials
IN   Tanaka, Hiroyuki; Kin, Ishi; Fu, Ryujun; Kimura, Shiro
PA   Fuji Xerox Co., Ltd., Japan
SO   Jpn. Kokai Tokkyo Koho, 4 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
IC   ICM  G03G005-06
     ICS  G03G005-04
ICA  H01L031-08
CC   74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
     Reprographic Processes)
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     ---------------     ----   --------    --------------------    --------
PI   JP 60258554          A2    19851220    JP 1984-92766           19840511
PRAI JP 1984-92766                19840511
CLASS
 PATENT NO.      CLASS  PATENT FAMILY CLASSIFICATION CODES
 --------------  -----  ----------------------------------------------
 JP 60258554     ICM    G03G005-06
                 ICS    G03G005-04
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ICA H01L031-08
IPCI G03G0005-06 [ICM,4]; G03G0005-04 [ICS,4]; H01L0031-08 [ICA,4]
IPCR G03G0005-06 [I,A]; G03G0005-06 [I,C*]

GI

/ Structure 15 in file .gra /

AB The electrophotog. materials have photosensitive layers contg. I (R = NHCOMe, NHSO2Me). The materials show high sensitivity. Thus, I (R = NHCOMe) was pulverized together with CH2Cl2 and steel balls for 12 h, ***mixed*** with Vylon 200 (polyester) and coated on an ***Al*** plate by .apprx.0.5 .mu. to form a charge-generating layer, on which Panlite contg. 50% 1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)-pyrazoline was coated by .apprx.15 .mu. to form a charge-transport layer. The resulting material was corona charged (-6 kV; 2 s), kept in the dark for 2 s, and irradiated with a W lamp at 10 lx, and showed initial surface voltage 720 V and E1/2 (voltage-halving exposure) 4.3 lx-s.

ST electrophotog photoconductor ***squarylium*** dye

IT Photography, electro-, photoconductors
(multilayer, with charge-generating layer contg. ***squarylium*** dye)

IT 57609-72-0
RL: USES (Uses)
(electrophotog. photoconductor with charge-transport layer contg., and charge-generating layer contg. ***squarylium*** dye)

IT 102305-12-4
RL: USES (Uses)
(electrophotog. photoconductor with charge-transport layer from, and charge-generating layer contg. ***squarylium*** dye)

IT 102305-11-3
RL: USES (Uses)
(electrophotog. photoreceptor with charge-generating layer contg.)

L4 ANSWER 35 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:216483 CAPLUS <<LOGINID::20060727>>
DN 104:216483
ED Entered STN: 14 Jun 1986
TI Electrophotographic photosensitive materials
IN Tanaka, Hiroyuki; Kin, Ishi; Fu, Ryujun; Kimura, Shiro
PA Fuji Xerox Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-06
ICS G03G005-04
ICA H01L031-08
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 60258555	A2	19851220	JP 1984-92767	19840511
PRAI JP 1984-92767		19840511		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60258555	ICM	G03G005-06
	ICS	G03G005-04
	ICA	H01L031-08
	IPCI	G03G0005-06 [ICM,4]; G03G0005-04 [ICS,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]

GI

/ Structure 16 in file .gra /

AB The title materials contain a photosensitive layer contg. I (R = OH, OMe). The materials show high sensitivity. Thus, I (R = OH) was pulverized together with CH2Cl2 and steel balls for 12 h, ***mixed*** with Vylon 200 (polyester), coated on an ***Al*** plate to .apprx.0.5 .mu. to form a charge-generating layer, and overcoated with Panlite (polycarbonate) contg. 50% 1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)-pyrazoline to .apprx.15 .mu. to form a charge-transfer layer. The resulting material was corona charged (-6 kV; 2 s), kept in the dark for 2 s, and irradiated with a W lamp at 10 lx, showing initial surface voltage 740 V and E1/2 (voltage-halving exposure) 4.8 lx-s.

ST electrophotog photosensitive materials; ***squarylium*** compd electrophotog photoconductor

IT Photography, electro-, photoconductors
(with charge-generating layer contg. ***squarylium*** compd., with improved sensitivity)

IT 102395-02-8 102395-03-9
RL: USES (Uses)
(electrophotog. photoconductor with charge-generating layer contg., for improved sensitivity)

L4 ANSWER 36 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:177645 CAPLUS <<LOGINID::20060727>>
DN 104:177645
ED Entered STN: 17 May 1986
TI ***Squarylium*** compound and photoreceptor containing it
IN Tanaka, Hiroyuki; Kin, Seki; Lyong, Sun Pu
PA Fuji Xerox Co., Ltd., Japan
SO Eur. Pat. Appl., 35 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07C119-06
ICS G03G005-06
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 146123	A2	19850626	EP 1984-115344	19841213
	EP 146123	A3	19860514		
	EP 146123	B1	19870909		
	R: DE, FR, GB				
	JP 60128452	A2	19850709	JP 1983-236204	19831216
	JP 03049427	B4	19910729		
	JP 60128453	A2	19850709	JP 1983-236205	19831216
	JP 03049428	B4	19910729		
	JP 60130558	A2	19850712	JP 1983-236203	19831216
	JP 03048948	B4	19910726		
	US 4908289	A	19900313	US 1986-942922	19861217
	US 4752650	A	19880621	US 1987-91340	19870831
PRAI	JP 1983-236203	A	19831216		
	JP 1983-236204	A	19831216		
	JP 1983-236205	A	19831216		
	US 1984-682203	B3	19841217		
	US 1985-744590	B1	19850614		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 146123	ICM	C07C119-06
	ICS	G03G005-06
	IPCI	C07C0119-06 [ICM,4]; G03G0005-06 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
JP 60128452	IPCI	G03G0005-06 [ICM,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
JP 60128453	IPCI	G03G0005-06 [ICM,4]; C07C0119-06 [ICA,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
JP 60130558	IPCI	C07C0119-06 [ICM,4]; G03G0005-06 [ICA,4]; H01L0031-08 [ICA,4]

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                IPCR   G03G0005-06 [I,A]; G03G0005-06 [I,C*]; H01L0031-08
                       [I,A]; H01L0031-08 [I,C*]
 US 4908289     IPCI   G03G0005-14 [ICM,4]; G03G0005-06 [ICS,4]
                IPCR   G03G0005-06 [I,A]; G03G0005-06 [I,C*]
                NCL    430/058.250; 430/058.300; 430/058.500; 430/058.550;
                       430/058.800; 430/073.000; 564/307.000
 US 4752650     IPCI   C07C0085-00 [ICM,4]; C07C0085-02 [ICS,4]; C07C0085-06
                       [ICS,4]
                IPCR   G03G0005-06 [I,A]; G03G0005-06 [I,C*]
                NCL    564/307.000
OS   CASREACT 104:177645
GI


/ Structure 17 in file .gra /


AB   The charge-generating layer of an electrophotog. photoreceptor contains a
       ***squarylium***   compd. represented by formula I or II (R = H, OH, C1-6
     alkyl, C1-4 alkoxy, halo; R1 = H, OH, C1-4 alkyl, C1-4 alkoxy).  The
     photoreceptor thus produced is highly sensitive and mech. strong.  The
     spectral sensitivity curve of the photoreceptor is substantially flat
     extending from the visible to near IR region.  Thus, 3,4-dihydroxy-3-
     cyclobutene-1,2-dione 0.76 and N-(p-chlorophenylmethyl)-N-methylaniline
     2.48 g were added to BuOH 26.8 mL and heated at 130-140.degree. for 4 h
     under agitation to give I (R = Cl; R1 = H) (III).  III 10 g was ground in
     a ball mill in CH2Cl2 160 mL,   ***mixed***   with a polyester resin
     (Vylon 200), coated on an   ***Al***   plate, dried to give a
     charge-generating layer (0.5 .mu.), overcoated with a 50:50 mixt. of
     1-phenyl-3-(p-diethylamino styryl)-5-(p-diethylaminophenyl)pyrazoline and
     a polycarbonate resin (panlite) to give a charge-transporting layer,
     charged by a 6 kV corona discharge, left in dark for 2 s to give a surface
     potential of 800 V, and exposed to a W halide lamp (10 lx) until the
     surface potential reduced to 1/2.  An exposure of 1.9 lx-s was required
     for such a potential redn.
ST     ***squarylium***   compd charge generator electrophotog; photoconductor
     electrophotog charge generating layer
IT   Photography, electro-, photoconductors
     Photography, electro-, plates
        (charge-generating layer contg.   ***squarylium***   compd. for)
IT   101462-69-5   101462-72-0   101462-73-1   101462-74-2   101462-75-3
     101462-76-4   101462-77-5   101462-78-6   101462-79-7   101462-80-0
     101462-81-1   101483-56-1   101483-57-2
     RL: USES (Uses)
        (charge-generating layer contg., for electrophotog. plates)
IT   129-79-3   519-73-3   11120-54-0   15546-43-7   25067-59-8   37372-26-2
     51134-09-9   53332-49-3   94927-42-1   101482-87-5
     RL: USES (Uses)
        (charge-transporting layer contg., for electrophotog. plates contg.
       charge-generating layer contg.   ***squarylium***   compd.)
IT   614-30-2   16547-09-4   16547-11-8   101663-45-0
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with dihydroxycyclobutenedione in prepn. of
          ***squarylium***   compd. charge-generating agents for electrophotog.
       plates)
IT   2892-51-5
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with N-methyl-N-phenylaniline derivs. in prepn. of
          ***squarylium***   compd. charge-generating agents for electrophotog.
       plates)

L4   ANSWER 37 OF 37  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   1985:87593  CAPLUS <<LOGINID::20060727>>
DN   102:87593
ED   Entered STN:  09 Mar 1985
TI   Electrophotographic photoreceptor
PA   Fuji Xerox Co., Ltd., Japan
SO   Jpn. Kokai Tokkyo Koho, 4 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
IC   G03G005-06; G03G005-04
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CC   74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
     Reprographic Processes)
FAN.CNT 1
     PATENT NO.           KIND   DATE        APPLICATION NO.        DATE
     --------------       ----   --------    -------------------    --------
PI   JP 59125735           A2    19840720    JP 1983-455            19830107
     JP 02031379           B4    19900712
PRAI JP 1983-455                 19830107
CLASS
 PATENT NO.       CLASS  PATENT FAMILY CLASSIFICATION CODES
 --------------   -----  ----------------------------------------------
 JP 59125735      IC     G03G005-06; G03G005-04
                  IPCI   G03G0005-06; G03G0005-04
GI


/ Structure 18 in file .gra /


AB   The claimed photoreceptor has a photosensitive layer contg. a
       ***squarylium***   dye having the general formula I (R = C2-6 linear
     alkyl, cyclic alkyl, Ph, substituted Ph). The photoreceptor has high
     sensitivity in the visible to near-IR spectral region. Thus, I (R = Et)
     30 was pulverized and   ***mixed***   with a polyester resin (Vylon 200;
     Toyobo Co. Ltd) 100 wt. parts and then coated on an   ***Al***   plate to
     form a charge carrier-generating layer. A charge carrier-transport layer
     contg. 1-phenyl-3-(p-diethylaminostyryl)-5-(p-
     diethylaminophenyl)pyrazoline and a carbonate resin (Panlite; Teijin Chem.
     Ltd.) was further coated thereon. The photoreceptor when charged to 760 V
     showed a sensitivity (lx-s for half voltage decay) of 1.6.
ST   photoreceptor electrophotog charge generator   ***squarylium***  ;
     cyclobutane deriv charge generator electrophotog
IT   Photography, electro-, photoconductors
     Photography, electro-, plates
        (composite, with   ***squarylium***   dye deriv.-contg. charge
        carrier-generating layer)
IT   Polyesters, uses and miscellaneous
     RL: USES (Uses)
        (electrophotog. photoreceptor with charge carrier-generating layer
        contg.)
IT   37337-82-9   94750-64-8   94750-65-9   94750-66-0   94750-67-1
     94750-68-2   94750-69-3
     RL: USES (Uses)
        (electrophotog. photoreceptor with charge carrier-generating layer
        contg.)


=> d his

     (FILE 'HOME' ENTERED AT 15:41:57 ON 27 JUL 2006)

     FILE 'CAPLUS' ENTERED AT 15:42:04 ON 27 JUL 2006
L1          1127 S (SQUARINE OR SQUARAINE OR SQUARILIUM OR SQUARYLIUM)
L2       4302206 S (LIGAND OR CHELAT? OR COMPLEX? OR METAL OR METALLIZED OR ALUM
L3           232 S L1 AND L2
L4            37 S (MIXED OR DIFFERENT OR COMPLEX(3A)SALT) AND L3

=> s (optical or laser or information) and l3
          893784 OPTICAL
              20 OPTICALS
          893792 OPTICAL
                    (OPTICAL OR OPTICALS)
          528870 LASER
          163425 LASERS
          542447 LASER
                    (LASER OR LASERS)
          413093 INFORMATION
            3073 INFORMATIONS
          415542 INFORMATION
                    (INFORMATION OR INFORMATIONS)
L5            73 (OPTICAL OR LASER OR INFORMATION) AND L3
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=> s l5 not l4
L6          63 L5 NOT L4

=> d all 1-63

L6   ANSWER 1 OF 63  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2006:558614  CAPLUS <<LOGINID::20060727>>
DN   145:73436
ED   Entered STN:  15 Jun 2006
TI     ***Optical***   recording medium containing   ***squarylium***
       ***metal***   salts
IN   Yoneda, Mayumi; Shinkai, Masahiro
PA   TDK Corporation, Japan
SO   Jpn. Kokai Tokkyo Koho, 17 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
CC   74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
     Reprographic Processes)
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   JP 2006150856        A2    20060615    JP 2004-347531         20041130
PRAI JP 2004-347531             20041130
CLASS
 PATENT NO.      CLASS  PATENT FAMILY CLASSIFICATION CODES
 --------------  -----  ----------------------------------------------
 JP 2006150856   IPCI   B41M0005-26 [I,A]; G11B0007-244 [I,A]; G11B0007-24
                        [I,C*]
                 FTERM  2H111/EA03; 2H111/EA12; 2H111/EA22; 2H111/EA25;
                        2H111/EA32; 2H111/EA44; 2H111/FB42; 5D029/JA04
AB   The invention is concerned about an   ***optical***   recording medium,
     such as disk, characterized by contg.   ***squarylium***     ***metal***
     salts in the recording layer.
ST     ***optical***   recording medium   ***squarylium***   salt
IT     ***Optical***   recording materials
         (  ***optical***   recording medium contg.   ***squarylium***
           ***metal***   salts for disks)
IT   Onium compounds
     RL: MOA (Modifier or additive use); USES (Uses)
        (  ***squarylium***  ;   ***optical***   recording medium contg.
           ***squarylium***     ***metal***   salts for disks)
IT   478629-01-5   890659-43-5   890659-44-6
     RL: MOA (Modifier or additive use); USES (Uses)
        (  ***optical***   recording medium contg.   ***squarylium***
           ***metal***   salts for disks)

L6   ANSWER 2 OF 63  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2006:378668  CAPLUS <<LOGINID::20060727>>
DN   145:58620
ED   Entered STN:  26 Apr 2006
TI   Protein labeling with red   ***squarylium***   dyes for analysis by
     capillary electrophoresis with   ***laser***  -induced fluorescence
     detection
AU   Yan, Weiying; Sloat, Amy L.; Yagi, Shigeyuki; Nakazumi, Hiroyuki; Colyer,
     Christa L.
CS   Department of Chemistry, Wake Forest University, Winston-Salem, NC, USA
SO   Electrophoresis (2006), 27(7), 1347-1354
     CODEN: ELCTDN; ISSN: 0173-0835
PB   Wiley-VCH Verlag GmbH & Co. KGaA
DT   Journal
LA   English
CC   9-7 (Biochemical Methods)
AB   Two new red luminescent asym.   ***squarylium***   dyes (designated
     "Red-1c and Red-3") have been shown to exhibit absorbance shifts to longer
     wavelengths upon the addn. of protein, along with a concomitant increase
     in fluorescence emission.  Specifically, the absorbance maxima for Red-1c
     and Red-3 dyes are 607 and 622 nm, resp., in the absence of HSA, and 642
     and 640 nm in the presence of HSA, making the excitation of their protein
       ***complexes***   feasible with inexpensive and robust diode
       ***lasers***  .  Fluorescence emission maxima, in the presence of HSA, are
     656 and 644 nm for Red-1c and Red-3, resp.  Because of the inherently low
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fluorescence of the dyes in their free state, Red-1c and Red-3 were used as on-column labels (i.e., with the dye incorporated into the sepn. buffer), thus eliminating the need for sample derivatization prior to injection and sepn. A comparison of precolumn and on-column labeling of proteins with these ***squarylium*** dyes revealed higher efficiencies and greater sensitivities for on-column labeling, which, when conducted with a basic, high-salt content buffer, permitted baseline resoln. of a mixt. of five model proteins. LOD for model proteins, such as transferrin, .alpha.-lactalbumin, BSA, and .beta.-lactoglobulin A and B, labeled with these dyes and analyzed by CE with LIF detection (CE-LIF) were dependent upon dye concn. and soln. pH, and are as low as 5 nM for BSA. Satisfactory linear relationships between peak height (or peak area) and protein concn. were obtained by CE-LIF for this on-column labeling method with Red-3 and Red-1c.

ST protein labeling red ***squarylium*** dye capillary electrophoresis ***laser*** fluorescence

IT Capillary electrophoresis
Fluorescent indicators
Human
Laser fluorometry
Laser induced fluorescence
Semiconductor ***lasers***
UV and visible spectra
(protein labeling with red ***squarylium*** dyes for anal. by capillary electrophoresis with ***laser*** -induced fluorescence detection)

IT Proteins
Transferrins
RL: ANT (Analyte); ANST (Analytical study)
(protein labeling with red ***squarylium*** dyes for anal. by capillary electrophoresis with ***laser*** -induced fluorescence detection)

IT Concentration (condition)
pH
(protein labeling with red ***squarylium*** dyes for anal. by capillary electrophoresis with ***laser*** -induced fluorescence detection in relation to)

IT Albumins, analysis
RL: ANT (Analyte); ANST (Analytical study)
(serum; protein labeling with red ***squarylium*** dyes for anal. by capillary electrophoresis with ***laser*** -induced fluorescence detection)

IT Lactalbumins
RL: ANT (Analyte); ANST (Analytical study)
(.alpha.-; protein labeling with red ***squarylium*** dyes for anal. by capillary electrophoresis with ***laser*** -induced fluorescence detection)

IT Lactoglobulins
RL: ANT (Analyte); ANST (Analytical study)
(.beta.-, A; protein labeling with red ***squarylium*** dyes for anal. by capillary electrophoresis with ***laser*** -induced fluorescence detection)

IT Lactoglobulins
RL: ANT (Analyte); ANST (Analytical study)
(.beta.-, B; protein labeling with red ***squarylium*** dyes for anal. by capillary electrophoresis with ***laser*** -induced fluorescence detection)

IT 7447-40-7, Potassium chloride, analysis
RL: ANT (Analyte); ANST (Analytical study)
(additive; protein labeling with red ***squarylium*** dyes for anal. by capillary electrophoresis with ***laser*** -induced fluorescence detection in relation to)

IT 890935-38-3 890935-39-4
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(protein labeling with red ***squarylium*** dyes for anal. by capillary electrophoresis with ***laser*** -induced fluorescence detection)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L6 ANSWER 3 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:343200 CAPLUS <<LOGINID::20060727>>
DN 144:401285
ED Entered STN: 14 Apr 2006
TI Filter for electronic display
IN Yamano, Junzo; Ukai, Katsumi
PA Kyowa Hakko Chemical Co., Ltd., Japan
SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 73
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006038685	A1	20060413	WO 2005-JP18607	20051007

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI JP 2004-295004 A 20041007
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

WO 2006038685 IPCI C09B0057-00 [I,A]; C07D0231-22 [I,A]; C07D0231-00 [I,C*]; C09B0057-10 [I,A]; G02B0005-22 [I,A]; G09F0009-00 [I,A]
ECLA C09B057/00S
GI

/ Structure 19 in file .gra /

AB A filter for electronic displays which contains a ***squarylium*** compd./ ***metal*** ***complex*** represented by the following general formula I (R1, R2 = H, alkyl, alkoxy, aralkyl, aryl, heterocyclyl; R3, R4 = H, alkyl, aralkyl, aryl, heterocyclyl; M = ***metal*** atom capable of coordinating; n = 1-4). 15 ***Squarylium*** compd./ ***metal*** ***complexes*** are synthesized.
ST ***optical*** filter ***squarylium*** compd ***metal*** ***complex*** synthesis electronic display
IT ***Optical*** filters
Optical imaging devices
(***squarylium*** compd./ ***metal*** ***complex*** -contg. filter for electronic display)
IT 882871-78-5P 882871-79-6P 882871-80-9P 882871-82-1P 882871-83-2P
882871-84-3P 882871-85-4P 882871-86-5P 882871-87-6P 882871-88-7P
882871-89-8P 882871-90-1P 882871-91-2P 882871-92-3P 882871-93-4P
RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(synthesis of ***squarylium*** compd./ ***metal*** ***complex*** for electronic display filter)
IT 856006-86-5P 882863-64-1P 882863-65-2P
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of ***squarylium*** compd./ ***metal*** ***complex*** for electronic display filter)
IT 78-81-9, Isobutylamine 110-89-4, Piperidine, reactions 110-91-8, Morpholine, reactions 110-96-3, Diisobutylamine 142-71-2, Copper acetate 6018-89-9, Nickel acetate tetrahydrate 6046-93-1 14024-63-6, Zinc acetyl acetonate 15306-17-9, Aluminum tris(ethylacetoacetate) 24544-04-5, 2,6-Diisopropylaniline
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of ***squarylium*** compd./ ***metal*** ***complex*** for electronic display filter)
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

(1) Kyowa Hakko Kemikaru Kabushiki Kaisha; WO 2005059608 A1 2005 CAPLUS
(2) Kyowa Hakko Kogyo Co Ltd; WO 0250190 A 2002 CAPLUS
(3) Kyowa Hakko Kogyo Co Ltd; EP 1334998 A1 2002 CAPLUS
(4) Kyowa Hakko Kogyo Co Ltd; US 2003187272 A1 2002 CAPLUS
(5) Ricoh Co Ltd; EP 1132902 A1 2002 CAPLUS
(6) Ricoh Co Ltd; JP 2001322356 A 2002 CAPLUS
(7) Ricoh Co Ltd; US 200144001 A1 2002
(8) Ricoh Co Ltd; JP 2002234259 A 2002 CAPLUS

L6 ANSWER 4 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:267002 CAPLUS <<LOGINID::20060727>>
DN 144:302213
ED Entered STN: 23 Mar 2006
TI Blue color filters having high color reproduction ability and liquid crystal displays therewith
IN Ishikawa, Hironori; Tsurutani, Yasuyuki; Kawana, Makoto; Terui, Yukiko; Ozawa, Tetsuo
PA Mitsubishi Chemical Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 39 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41, 73
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI JP 2006079012 A2 20060323 JP 2004-265940 20040913
PRAI JP 2004-265940 20040913
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006079012	IPCI	G02B0005-22 [I,A]; G02B0005-20 [I,A]; G02F0001-1335 [I,A]; G02F0001-13 [I,C*]
	FTERM	2H048/BA45; 2H048/BB02; 2H048/BB04; 2H048/BB42; 2H048/CA04; 2H048/CA14; 2H048/CA19; 2H091/FA02; 2H091/FA41Z; 2H091/FB04; 2H091/FB12; 2H091/FC01; 2H091/FC10; 2H091/FC23; 2H091/FC26; 2H091/FD04; 2H091/FD05; 2H091/FD24; 2H091/LA15

AB The filters, imparting high contrast to LCD, have (A) blue filters wherein blue pigments are dispersed in binder resins and (B) spectral control filters wherein dyes (not pigments) having absorption max. 455-540 nm and half width .ltoreq.50 nm are dispersed in binder resins, and satisfy the blue pigment ratio to all the pigments included .gtoreq.90%. The filters may contain .ltoreq.10% violet pigments. The dyes in B may be pyrazole ***squarylium*** compds., porphyrin compds., and/or dipyrromethene ***metal*** ***chelate*** compds.

ST blue filter LCD color reprodn improvement; spectral control blue filter LCD contrast; pyrazole ***squarylium*** dye spectral control blue filter

IT Pigments, nonbiological
(blue, in blue filters; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)

IT Heterocyclic compounds
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(dipyrromethenes, ***metal*** ***complex*** , nonpigment dyes; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)

IT Liquid crystal displays
Optical filters
(high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)

IT Porphyrins
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(nonpigment dyes; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)

IT 147-14-8, C.I. Pigment Blue 15:6 215247-95-3, C.I. Pigment Violet 23
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(blue filters; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)

IT 288-13-1D, Pyrazole, ***squarylium*** derivs.
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(nonpigment dyes; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)

IT 9011-14-7, Poly(methyl methacrylate)
RL: DEV (Device component use); USES (Uses)
(spectral control filters; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)

IT 228091-06-3P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(spectral control filters; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)

IT 375823-53-3
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(spectral control filters; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)

L6 ANSWER 5 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:266979 CAPLUS <<LOGINID::20060727>>
DN 144:321662
ED Entered STN: 23 Mar 2006
TI Color filter structures and liquid crystal displays with high contrast and good color reproducibility

IN Ishikawa, Hironori; Tsurutani, Yasuyuki; Kawana, Makoto; Terui, Yukiko; Ozawa, Tetsuo
PA Mitsubishi Chemical Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 68 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2006079011	A2	20060323	JP 2004-265939	20040913
PRAI JP 2004-265939		20040913		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006079011	IPCI	G02B0005-20 [I,A]; G02F0001-1335 [I,A]; G02F0001-13 [I,C*]
	FTERM	2H048/BA02; 2H048/BA45; 2H048/BA47; 2H048/BB02; 2H048/BB42; 2H091/FA02Y; 2H091/FA07X; 2H091/FA07Z; 2H091/FA11Z; 2H091/FA14Z; 2H091/FA23Z; 2H091/FA32Z; 2H091/FA37Z; 2H091/FA41Z; 2H091/FB02; 2H091/FC02; 2H091/FC29; 2H091/GA01; 2H091/LA16; 2H091/LA17

AB The color filter structure comprises (A) color filter with chromaticity (C light source of CIE std., view angle 2.degree., white display) x .ltoreq.0.35 and y .ltoreq.0.38 having red, green, and blue micropixels colored with pigments and (B) a high-contrast filter with chromaticity x .gtoreq.0.30 and y .ltoreq.0.45 contg. dyes, which have absorption peaks in the visible region, monomol.-dispersed in a resin matrix, wherein the color filter structure as a whole shows chromaticity x = 0.25-0.35 and y = 0.28-0.38. The dyes may be selected from ***squarylium*** compds., (tetraaza)porphyrins, (di)azaporphyrins, and dipyrromethene ***metal*** ***chelates*** . The hight-contrast filter may be prepd. by applying a compn. contg. the dyes on an ***optical*** part (light diffuser, polarizer sheet, waveguide, retardation film, etc.) of a planar light source or adding the dyes to the ***optical*** part substrate.

ST color filter LCD contrast chromaticity; high contrast filter LCD dye monomol dispersion; liq crystal display filter color reproducibility

IT ***Chelates***
RL: DEV (Device component use); USES (Uses)
(dipyrromethenes, dyes, high-contrast filter contg.; high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT Heterocyclic compounds
RL: DEV (Device component use); USES (Uses)
(dipyrromethenes, ***metal*** ***chelates*** , dyes, high-contrast filter contg.; high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT Porphyrins
RL: DEV (Device component use); USES (Uses)
(dyes, high-contrast filter contg.; high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT Dyes
(high-contrast filter contg.; high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT Liquid crystal displays
Optical filters
(high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT Polyesters, uses
RL: DEV (Device component use); USES (Uses)
(high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT Onium compounds
RL: DEV (Device component use); USES (Uses)
(***squarylium*** , dyes, high-contrast filter contg.; high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT 228091-06-3P
RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)
(color filter binder; high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT 25034-86-0, Dianal BR 80
RL: DEV (Device component use); POF (Polymer in formulation); USES (Uses)
(high-contrast filter binder; high-contrast filters contg. specific dyes for LCD with good color reproducibility)
IT 375823-53-3
RL: DEV (Device component use); USES (Uses)
(high-contrast filter contg.; high-contrast filters contg. specific dyes for LCD with good color reproducibility)
IT 25038-59-9, PET polymer, uses
RL: DEV (Device component use); USES (Uses)
(high-contrast filter substrate; high-contrast filters contg. specific dyes for LCD with good color reproducibility)

L6 ANSWER 6 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:147955 CAPLUS <<LOGINID::20060727>>
DN 144:243475
ED Entered STN: 17 Feb 2006
TI ***Optical*** recording medium, it recording-readout method, and ***optical*** recording apparatus
IN Yashiro, Toru
PA Ricoh Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2006048892	A2	20060216	JP 2004-326759	20041110
WO 2006051922	A1	20060518	WO 2005-JP20764	20051107

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI JP 2004-193563	A	20040630	
JP 2004-326759	A	20041110	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006048892	IPCI	G11B0007-24 [I,A]; G11B0007-244 [I,A]; G11B0007-254 [I,A]; G11B0007-257 [I,A]; B41M0005-26 [I,A]
	FTERM	2H111/EA03; 2H111/EA12; 2H111/EA22; 2H111/EA32; 2H111/EA37; 2H111/FA02; 2H111/FA11; 2H111/FA12; 2H111/FA14; 2H111/FA37; 2H111/FB48; 2H111/GA03; 2H111/GA07; 5D029/JA04; 5D029/JB09; 5D029/JB13; 5D029/JB14; 5D029/JB21; 5D029/JB35; 5D029/JB47; 5D029/LA15; 5D029/LB07; 5D029/RA02; 5D029/WB17; 5D029/WC01
WO 2006051922	IPCI	G11B0007-24 [I,A]; G11B0007-244 [I,A]; G11B0007-257 [I,A]; G11B0007-254 [I,A]; B41M0005-26 [I,A]

AB The invention relates to a rewritable ***optical*** disk comprising a first ***optical*** recording layer and a second ***optical*** recording layer, wherein the second ***optical*** recording layer contains org. dyes including at least one ***squarylium*** ***metal*** ***chelate*** compd. and the org. dyes show a DTA peak width of .ltoreq.45.degree.. The protective layer of the ***optical*** disk contains ZnS.
ST ***optical*** recording medium double layer disk ***squarylium*** dye
IT Erasable ***optical*** disks
Optical memory devices
Optical recording

(***optical*** recording medium with ***squarylium*** dye, it recording-readout method, and ***optical*** recording app.)

IT 439591-99-8 823809-64-9 876407-70-4 876407-71-5 876407-72-6 876407-73-7
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(***optical*** recording medium with ***squarylium*** dye, it recording-readout method, and ***optical*** recording app.)

IT 1314-98-3, Zinc sulfide, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(protective layer; ***optical*** recording medium with ***squarylium*** dye, it recording-readout method, and ***optical*** recording app.)

L6 ANSWER 7 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:31396 CAPLUS <<LOGINID::20060727>>
DN 144:138998
ED Entered STN: 13 Jan 2006
TI ***Optical*** recording medium, recording and reproducing method thereof, and ***optical*** recording apparatus
IN Yashiro, Tohru; Nakamura, Yuki; Mikami, Tatsuo; Shimizu, Ikuo; Kinugasa, Motoharu; Toyoda, Hiroshi
PA Ricoh Company, Ltd., Japan; Kyowa Hakko Chemical Co., Ltd.
SO PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM B41M005-26
ICS G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006004172	A1	20060112	WO 2005-JP12523	20050630
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2006044241	A2	20060216	JP 2005-188996	20050628
PRAI JP 2004-193576	A	20040630		
JP 2005-188996	A	20050628		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2006004172	ICM	B41M005-26
	ICS	G11B007-24
	IPCI	B41M0005-26 [ICM,7]; G11B0007-24 [ICS,7]
JP 2006044241	IPCI	B41M0005-26 [I,A]; G11B0007-244 [I,A]; G11B0007-24 [I,A]; G11B0007-254 [I,A]; G11B0007-257 [I,A]
	FTERM	2H111/EA03; 2H111/EA12; 2H111/EA22; 2H111/EA25; 2H111/EA39; 2H111/FA02; 2H111/FA12; 2H111/FA14; 2H111/FA27; 2H111/FB48; 2H111/FB60; 5D029/JA04; 5D029/JB09; 5D029/JB13; 5D029/JB35; 5D029/JB47; 5D029/LA15; 5D029/LB07; 5D029/WB17

AB An ***optical*** recording medium contains a 1st substrate, a 1st ***information*** layer, an intermediate layer, a 2nd ***information*** layer and a 2nd substrate in this order, where the 1st ***information*** layer contains a 1st recording layer disposed on the 1st substrate and the 2nd ***information*** layer contains a reflective layer, a 2nd recording layer contg. an org. dye and a protective layer which are disposed on the 2nd substrate in this order; and the 2nd recording layer contains an org. dye which is at least one

selected from the group consisting of the specified ***squarylium*** ***metal*** ***chelate*** compds. The material has improved light-resistance and can be applied for DVD.

ST ***optical*** recording medium DVD ***squarylium*** ***metal*** ***chelate***

IT ***Optical*** ROM disks
Optical recording materials
(***optical*** recording medium, recording and reproducing method thereof, and ***optical*** recording app.)

IT 439591-83-0 439591-91-0 439592-01-5 873447-89-3 873447-90-6 873447-91-7 873447-92-8
RL: NUU (Other use, unclassified); USES (Uses)
(***optical*** recording medium, recording and reproducing method thereof, and ***optical*** recording app.)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Hitachi Maxell Ltd; JP 2003170664 A 2003 CAPLUS
(2) Pioneer Corporation; EP 1067535 A2 2001 CAPLUS
(3) Pioneer Corporation; JP 200123237 A 2001
(4) Pioneer Corporation; US 2005063295 A1 2001 CAPLUS
(5) Ricoh Company Ltd; EP 1335357 A1 2003 CAPLUS
(6) Ricoh Company Ltd; US 20030206514 A1 2003
(7) Ricoh Company Ltd; JP 2003305958 A 2003 CAPLUS

L6 ANSWER 8 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1225013 CAPLUS <<LOGINID::20060727>>
ED Entered STN: 18 Nov 2005
TI Towards an Understanding of ***Squarylium*** Dye - Protein Interactions by Capillary Electrophoresis Frontal Analysis
AU Colyer, Christa L.; Yan, Weiying
CS Department of Chemistry, Wake Forest University, Winston-Salem, NC, 27109, USA
SO Abstracts, 57th Southeast/61st Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN, United States, November 1-4 (2005), NOV04-322 Publisher: American Chemical Society, Washington, D. C. CODEN: 69HOKM
DT Conference; Meeting Abstract
LA English
AB Many high sensitivity anal. techniques require derivatization of the analyte prior to anal. Noncovalent interactions between probe mols. and analyte mols. typically occur with great speed and minimal sample handling and so are attractive options. Understanding the nature of these interactions and the compn. of the resulting ***complexes*** presents an important area of study that can be facilitated by capillary electrophoresis - frontal anal. (CE-FA). In this work, red luminescent ***squarylium*** dyes Red-1c and Red-3 are shown to effectively label a mixt. of proteins in an on-column derivatization procedure employing a high salt buffer, thereby facilitating protein anal. by CE with ***laser*** -induced fluorescence (LIF) detection. Subsequently, in frontal anal. mode, the CE method is modified by injection of a large sample plug consisting of red ***squarylium*** dye and protein in equil. Assuming the protein and the protein-dye ***complex*** have approx. the same mobility, which differs from that of the free dye, CE-FA produces electropherograms with two plateaus corresponding to these sample components. The free dye plateau allows for the detn. of free dye content and ultimately, the assocn. const. Ki and no. of binding sites ni for i independent binding sites, thereby shedding light on the nature of ***squarylium*** dye-protein interactions.

L6 ANSWER 9 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1218587 CAPLUS <<LOGINID::20060727>>
DN 143:485869
ED Entered STN: 17 Nov 2005
TI ***Optical*** recording media, ***optical*** memory devices therefor, and writing/reading method therefor
IN Noguchi, Shu; Sato, Tsutomu; Tomura, Tatsuya; Ueno, Yasunobu; Shimizu, Ikuo; Kinugasa, Motoharu; Toyota, Hiroshi
PA Ricoh Co., Ltd., Japan; Kyowa Oil and Fat Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 63 pp. CODEN: JKXXAF
DT Patent
LA Japanese

IC ICM B41M005-26
ICS G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005319728	A2	20051117	JP 2004-140896	20040511
PRAI JP 2004-140896		20040511		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005319728	ICM	B41M005-26
	ICS	G11B007-24
	IPCI	B41M0005-26 [ICM,7]; G11B0007-24 [ICS,7]
	FTERM	2H111/EA03; 2H111/EA12; 2H111/EA22; 2H111/EA25; 2H111/EA43; 2H111/FA12; 2H111/FA23; 2H111/FB42; 2H111/FB43; 2H111/FB45; 2H111/FB48; 5D029/JA04; 5D029/JB47; 5D029/JC05; 5D029/MA13; 5D029/WB11; 5D029/WB14

GI

/ Structure 20 in file .gra /

AB The media possess, on substrates, recording layers contg. (A) formazan ***chelate*** compds. having absorption max. (Amax) at .gtoreq.500 nm and <650 nm, (B) ***squarylium*** compds. having Amax .gtoreq.500 nm and <650 nm, and (C) compds. having Amax .gtoreq.650 nm and .ltoreq.800 nm. The compds. A and C may be constituted by I and/or II [X, Y, Z = heterocycle; Z1-Z2 = atoms constituting the heterocycles; A, A1, A2 = alkyl(carbonyl), aryl(carbonyl), alkenyl, alkoxycarbonyl, heterocycle; B = alk(en)yl, aryl; B1, B2 = alk(en)ylene, arylene; W = CH2, SO2; n = 0, 1] and (compds. of) ***metals*** . The media may be characterized by writing/reading wavelength 60-720 nm, track pitch 0.7-0.8 .mu.m, and guide grooves (as half width) 0.18-0.40 .mu.m.

ST ***optical*** disk wavelength shift dependency minimized; formazan ***chelate*** ***squarylium*** compd ***optical*** disk; rewritable DVD formazan ***chelate*** utilized

IT ***Optical*** disks
(digital versatile disks, rewritable; rewritable DVD having recording layers contg. formazan ***chelate*** compds. and ***squarylium*** compds.)

IT Polycarbonates, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(disk substrates; rewritable DVD having recording layers contg. formazan ***chelate*** compds. and ***squarylium*** compds.)

IT ***Optical*** recording materials
(rewritable DVD having recording layers contg. formazan ***chelate*** compds. and ***squarylium*** compds.)

IT 142315-00-2 344933-85-3 344933-93-3 869361-07-9 869794-28-5 869794-29-6 869794-30-9 869794-31-0 869794-32-1 869794-34-3
RL: TEM (Technical or engineered material use); USES (Uses)
(recording layers; rewritable DVD having recording layers contg. formazan ***chelate*** compds. and ***squarylium*** compds.)

IT 7429-90-5, Aluminum, uses 7440-22-4, Silver, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(reflective layers; rewritable DVD having recording layers contg. formazan ***chelate*** compds. and ***squarylium*** compds.)

L6 ANSWER 10 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:683221 CAPLUS <<LOGINID::20060727>>
DN 143:338585
ED Entered STN: 01 Aug 2005
TI A regenerative chemodosimeter based on ***metal*** -induced dye formation for the highly selective and sensitive ***optical*** determination of Hg2+ ions
AU Ros-Lis, Jose V.; Marcos, M. Dolores; Martinez-Manez, Ramon; Rurack, Knut; Soto, Juan
CS Centro de Investigacion en Quimica Molecular Aplicada Departamento de

Quimica Universidad Politecnica de Valencia, Valencia, 46071, Spain
SO Angewandte Chemie, International Edition (2005), 44(28), 4405-4407
CODEN: ACIEF5; ISSN: 1433-7851
PB Wiley-VCH Verlag GmbH & Co. KGaA
DT Journal
LA English
CC 79-6 (Inorganic Analytical Chemistry)
Section cross-reference(s): 61
AB Hg2+-ion-triggered formation of a brightly fluorescent ***squaraine*** dye is used as a novel approach for the design of highly selective and sensitive chromofluorogenic probes for the anal. of Hg2+ ions down to concns. < 2 ppb. Through the adsorption of the sensor on a solid support a prototype reusable test strip is also generated.
ST chemodosimeter ***metal*** dye ***optical*** detn mercury ion
IT Titration
(fluorometric; mercury (II) ions detn. in soln. by fluorescent titrn. and spectrophotometry with regenerative chromofluorogenic chemodosimeter)
IT Colorimetric indicators
Fluorescent indicators
Fluorometry
Spectrophotometry
(mercury (II) ions detn. in soln. by fluorescent titrn. and spectrophotometry with regenerative chromofluorogenic chemodosimeter)
IT 7732-18-5, Water, analysis
RL: AMX (Analytical matrix); ANST (Analytical study)
(mercury (II) ions detn. in soln. by fluorescent titrn. and spectrophotometry with regenerative chromofluorogenic chemodosimeter)
IT 7439-97-6, Mercury, analysis 99663-97-5, Bis(4-dibutylaminophenyl) ***squaraine*** 484679-03-0
RL: ANT (Analyte); ANST (Analytical study)
(mercury (II) ions detn. in soln. by fluorescent titrn. and spectrophotometry with regenerative chromofluorogenic chemodosimeter)
IT 865244-36-6P 865244-37-7P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(mercury (II) ions detn. in soln. by fluorescent titrn. and spectrophotometry with regenerative chromofluorogenic chemodosimeter)
IT 107-03-9, 1-Propanethiol
RL: RCT (Reactant); RACT (Reactant or reagent)
(mercury (II) ions detn. in soln. by fluorescent titrn. and spectrophotometry with regenerative chromofluorogenic chemodosimeter)
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L6 ANSWER 11 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:609170 CAPLUS <<LOGINID::20060727>>
DN 143:116491
ED Entered STN: 14 Jul 2005
TI Wavelength selective absorbing films with good appearance and near infrared absorption
IN Mori, Kenichi; Kamisaka, Sasa; Odo, Shinya; Morishige, Chikao
PA Toyobo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 27 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G02B005-22
ICS B32B007-02; B32B027-18
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73, 74
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005189736	A2	20050714	JP 2003-434287	20031226
PRAI JP 2003-434287		20031226		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005189736	ICM	G02B005-22
	ICS	B32B007-02; B32B027-18
	IPCI	G02B0005-22 [ICM,7]; B32B0007-02 [ICS,7]; B32B0027-18 [ICS,7]
	IPCR	B32B0007-02 [I,A]; B32B0007-02 [I,C*]; B32B0027-18 [I,A]; B32B0027-18 [I,C*]; G02B0005-22 [I,A]; G02B0005-22 [I,C*]
	FTERM	2H048/CA04; 2H048/CA09; 2H048/CA12; 2H048/CA15; 2H048/CA19; 2H048/CA23; 4F100/AK01A; 4F100/AK42B; 4F100/AR00A; 4F100/AT00B; 4F100/BA02; 4F100/BA07; 4F100/CA07; 4F100/CA13A; 4F100/CA18A; 4F100/CA30; 4F100/EH46; 4F100/EJ86; 4F100/GB41; 4F100/JD10; 4F100/JK02; 4F100/JN01B; 4F100/JN02; 4F100/JN08; 4F100/JN08A; 4F100/YY00

AB Title films with max. color difference (.DELTA.E) in transverse direction .ltoreq.1.0 (obtained from 2 points measured within 0.1 m from each edge position and equally divided 3 points between the measured edge 2 points) comprise (A) wavelength selective absorbing layers contg. near IR absorbing colorants, neon cutting colorants, resins, and surfactants and (B) transparent substrates, wherein .DELTA.E = [(La-Lm)2 + (aa-am)2 + (ba-bm)2]1/2; Lm, am, bm = color tone value of L, a, b in each measured position and La, aa, ba = color tone value of L, a, b in whole measured position. Thus, an anchor coat comprising isopropanol 28.9, water 50.0, Nikasol A 08 (acrylic melamine resin) 10.0, Vylonal MD 1250 (polyester) 10.0, Epostar MA 1001 1.0, and Paintad 32 0.1% was applied on both side of a stretched polyethylene terephthalate film (length direction, 3.5-folds), dried at 120.degree. for 20 s, heated at 140.degree., stretched 3.7-folds in the width direction, relaxed 5% in the width direction at 235.degree. to give a transparent film with total light transmittance 90.2% and haze 0.5%, a wavelength selective absorbing coating comprising cyclopentanone 41.50, toluene 41.50, O-PET (polyester) 16.15, IRG 022 (diimmonium salt) 0.5653, MIR 101 (nickel ***metal*** ***complex***) 0.1547, IR 301 (cyanine compd.) 0.0461, CY 10 (cyanine compd.) 0.0939, SD 184 (***squarylium*** compd.) 0.0471, Paintad 57 0.0340% was applied thereon and dried to give a test piece with near IR transmittance 5.0%, neon light transmittance 34.2%, visible light transmittance 62.5%, L value 75.5, a value -4.2, b value -7.3, .DELTA.E 0.2, and good appearance.

ST wavelength selective absorbing film appearance near IR absorption; polyethylene terephthalate base film; near IR absorbing colorant polyester wavelength selective absorbing layer

IT ***Optical*** materials
(IR absorbers, near iR; wavelength selective absorbing films with good appearance and near IR absorption)

IT Polysiloxanes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(Paintad 57, surfactant in wavelength selective absorbing layers;

wavelength selective absorbing films with good appearance and near IR absorption)
IT IR materials
(absorbers, near iR; wavelength selective absorbing films with good appearance and near IR absorption)
IT Aminoplasts
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(acrylic, anchor coat; wavelength selective absorbing films with good appearance and near IR absorption)
IT Acrylic polymers, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(aminoplast-, anchor coat; wavelength selective absorbing films with good appearance and near IR absorption)
IT Polyesters, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(anchor coat; wavelength selective absorbing films with good appearance and near IR absorption)
IT Transparent films
(base films; wavelength selective absorbing films with good appearance and near IR absorption)
IT Polyesters, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(cardo, wavelength selective absorbing layer; wavelength selective absorbing films with good appearance and near IR absorption)
IT Coloring materials
(near IR absorbing; wavelength selective absorbing films with good appearance and near IR absorption)
IT Cardo polymers
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(polyesters, wavelength selective absorbing layer; wavelength selective absorbing films with good appearance and near IR absorption)
IT Electromagnetic shields
(wavelength selective absorbing films with good appearance and near IR absorption)
IT Coating materials
Surfactants
(wavelength selective absorbing layers; wavelength selective absorbing films with good appearance and near IR absorption)
IT 120860-05-1, Nikasol A 08 146104-37-2, Vylonal MD 1250
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(anchor coat; wavelength selective absorbing films with good appearance and near IR absorption)
IT 25038-59-9, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(base film; wavelength selective absorbing films with good appearance and near IR absorption)
IT 523-42-2D, Cyanine, derivs. 5496-71-9, IRG 022 28984-20-5, MIR 101 173474-43-6 850566-41-5, IR 301
RL: MOA (Modifier or additive use); USES (Uses)
(near IR absorbing colorant; wavelength selective absorbing films with good appearance and near IR absorption)
IT 111-02-4D, Squalene, derivs. 857895-05-7, SD 184
RL: MOA (Modifier or additive use); USES (Uses)
(neon cutting colorant; wavelength selective absorbing films with good appearance and near IR absorption)
IT 164721-64-6, O-PET
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(wavelength selective absorbing layer; wavelength selective absorbing films with good appearance and near IR absorption)

L6 ANSWER 12 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:577598 CAPLUS <<LOGINID::20060727>>
DN 143:258841
ED Entered STN: 05 Jul 2005
TI An artificial siderophore for the detection of iron(III)

AU Wallace, Karl J.; Gray, Mark; Zhong, Zhenlin; Lynch, Vincent M.; Anslyn, Eric V.

CS Department of Chemistry and Biochemistry, University of Texas at Austin, Austin, TX, 78712-1167, USA

SO Dalton Transactions (2005), (14), 2436-2441
CODEN: DTARAF; ISSN: 1477-9226
PB Royal Society of Chemistry
DT Journal
LA English

CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 22, 25

OS CASREACT 143:258841

AB An artificial siderophore (I) in the form of a ***squaraine*** dye has been synthesized. The bidentate ***ligand*** ***chelates*** to Fe(III) between the deprotonated hydroxyl group on the ortho position of the ring adjacent to the carbonyl group of the cyclobutadiene ring. The ***optical*** response is due to a subtle geometry change of I on ***chelation*** to Fe(III). This artificial siderophore forms a 2:1 ***ligand*** : ***metal*** ***complex*** , as indicated by a sigmoidal isotherm (Ka = 107 M-1). The ***optical*** response on the addn. of Fe(III) is obsd. at low concns. in comparison to other ***metal*** salts. The X-ray crystal structure and calcd. structures of dye I are also included, and will be discussed.

ST siderophore ***squaraine*** dye prepn iron ***complex*** ; color ***chelating*** agent siderophore ***squaraine*** dye iron ***complex*** prepn

IT ***Chelating*** agents
Molecular modeling
(prepn. of [bis[[di(hydroxy)ethyl]amino]di(hydroxy)phenyl] ***squaraine*** , study of its properties as artificial siderophore for detection of iron(III), study of its crystal and mol. structures, and mol. modeling)

IT Siderophores
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of [bis[[di(hydroxy)ethyl]amino]di(hydroxy)phenyl] ***squaraine*** , study of its properties as artificial siderophore for detection of iron(III), study of its crystal and mol. structures, and mol. modeling)

IT 108-73-6, 1,3,5-Benzenetriol 111-42-2, Diethanol amine, reactions 2892-51-5, Squaric acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of [bis[[di(hydroxy)ethyl]amino]di(hydroxy)phenyl] ***squaraine*** and study of its properties as artificial siderophore for detection of iron(III))

IT 7487-94-7, Mercury dichloride, processes 7646-79-9, Cobalt dichloride, processes 7646-85-7, Zinc dichloride, processes 7705-08-0, Iron chloride (FeCl3), processes 7718-54-9, Nickel dichloride, processes 7758-94-3, Iron dichloride 7773-01-5, Manganese dichloride
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(prepn. of [bis[[di(hydroxy)ethyl]amino]di(hydroxy)phenyl] ***squaraine*** and study of its properties as artificial siderophore for selective detection of iron(III))

IT 863409-02-3P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(prepn. of [bis[[di(hydroxy)ethyl]amino]di(hydroxy)phenyl] ***squaraine*** , study of its properties as artificial siderophore for detection of iron(III), study of its crystal and mol. structures, and mol. modeling)

IT 219315-57-8P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of [bis[[di(hydroxy)ethyl]amino]di(hydroxy)phenyl] ***squaraine*** , study of its properties as artificial siderophore for detection of iron(III), study of its crystal and mol. structures, and mol. modeling)

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L6 ANSWER 13 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:542724 CAPLUS <<LOGINID::20060727>>
ED Entered STN: 23 Jun 2005
TI ***Optical*** Switching Properties of Dye Doped Organic/Inorganic Composite Films
AU Stevens, Nathan; Akins, Daniel L.
CS Center For The Analysis of Structures And Interface, The City College of New York, New York, NY, 10031, USA
SO Abstracts, 37th Middle Atlantic Regional Meeting of the American Chemical Society, New Brunswick, NJ, United States, May 22-25, 2005 (2005), GENE-307 Publisher: American Chemical Society, Washington, D. C. CODEN: 69GVWG
DT Conference; Meeting Abstract
LA English
AB Easily processable composite films consisting of a non-ionic surfactant, Pluronic P123, as the org. component, and silica as the inorg. component have been fabricated. These films served as the host matrixes for various ***squarylium*** - and xanthene-type org. dyes. Picosecond time-resolved luminescent studies revealed that the excited state lifetimes of the ***squarylium*** dyes increased when compared to those measured in soln. The xanthene dyes' lifetimes, on the other hand showed a moderate decrease upon being incorporated into the solid matrix. In the case of the ***squarylium*** dyes, addn. of antimony doped tin oxide nanoparticles led to either an increase or decrease in the lifetimes, depending on the structure and charge of the dye. Also, substantial decreases in excited state lifetimes are obsd. with the addn. of well known org. quenchers: Me viologen, p-nitroaniline, or bromophenol blue. The high quenching efficiencies obsd. indicate that the dyes and the quenchers form ***complexes*** from both being sequestered within the micro-environment of the micelles formed by the surfactant. The excellent photostability and ultrafast ground state recovery of the intercalated dye ***complexes*** make these composite films ideally suited for use as the active component in an ***optical*** switching device.

L6 ANSWER 14 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:258903 CAPLUS <<LOGINID::20060727>>
DN 142:345266
ED Entered STN: 25 Mar 2005
TI Dipyrromethene dye-containing ***optical*** filters for high-contrast electronic displays
IN Terui, Yukiko; Ozawa, Tetsuo; Haraguchi, Yukiya; Morii, Hidekazu
PA Mitsubishi Chemical Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 44 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G02B005-22
ICS C09B023-00; C09B047-00; C09B057-00; C09B069-02; C09K011-06; H04N005-72; H05B033-02; H05B033-14
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41, 73
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005077953	A2	20050324	JP 2003-310699	20030902

PRAI JP 2003-310699 20030902

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005077953	ICM	G02B005-22
	ICS	C09B023-00; C09B047-00; C09B057-00; C09B069-02; C09K011-06; H04N005-72; H05B033-02; H05B033-14
	IPCI	G02B0005-22 [ICM,7]; C09B0023-00 [ICS,7]; C09B0047-00 [ICS,7]; C09B0057-00 [ICS,7]; C09B0069-02 [ICS,7]; C09B0069-00 [ICS,7,C*]; C09K0011-06 [ICS,7]; H04N0005-72 [ICS,7]; H05B0033-02 [ICS,7]; H05B0033-14 [ICS,7]
	IPCR	C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0047-00 [I,A]; C09B0047-00 [I,C*]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0069-00 [I,C*]; C09B0069-02 [I,A]; C09K0011-06 [I,A]; C09K0011-06 [I,C*]; G02B0005-22 [I,A]; G02B0005-22 [I,C*]; H04N0005-72 [I,A]; H04N0005-72 [I,C*]; H05B0033-02 [I,A]; H05B0033-02 [I,C*]; H05B0033-14 [I,A]; H05B0033-14 [I,C*]
	FTERM	2H048/CA04; 2H048/CA15; 2H048/CA19; 3K007/AB17; 3K007/BB06; 3K007/DB03; 4H056/CA01; 4H056/CC01; 4H056/CC02; 4H056/CC08; 4H056/CD05; 4H056/CE03; 4H056/CE06; 4H056/DD03; 4H056/DD06; 4H056/DD29; 4H056/EA09; 4H056/FA01; 5C058/DA03

OS MARPAT 142:345266
GI

/ Structure 21 in file .gra /

AB The filters for electronic displays (e.g., CRT, LCD, plasma displays) have layers contg. dipyrromethene dyes with absorption max. 530-560 nm, such as I [R11-R19 = H, halo, nitro, cyano, OH, amino, (esterified)carboxy, sulfo, acyl(oxy), alkyl(oxy), alkylthio, alkenyl, aryl(oxy), arylthio, heterocyclic(oxy), carbamoyl; M1 = transition ***metal*** atom]. The filters may have layers contg. tetraazaporphyrins, ***squarylium*** compds., or cyanine dyes (Markush structures are given).
ST dipyrromethene dye ***optical*** filter electronic display contrast; CRT LCD plasma display filter dipyrromethene dye; display filter dipyrromethene azaporphyrin ***squarylium*** cyanine dye
IT Cyanine dyes
Dyes
Optical filters
Optical imaging devices
(dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)

IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)
IT Heterocyclic compounds
RL: TEM (Technical or engineered material use); USES (Uses)
(dipyrromethenes, dyes; dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)
IT Onium compounds
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(***squarylium*** , dyes; dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)
IT Porphyrins
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(tetraaza, dyes; dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)
IT 25038-59-9, T 600E/W07, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(A 7300, T 600E/W07; dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)
IT 25034-86-0, Dianal BR 80
RL: TEM (Technical or engineered material use); USES (Uses)
(dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)
IT 4174-09-8 220219-47-6 518991-92-9 848417-92-5
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(dyes; dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)
IT 848421-82-9
RL: TEM (Technical or engineered material use); USES (Uses)
(dyes; dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)

L6 ANSWER 15 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:250068 CAPLUS <<LOGINID::20060727>>
DN 144:29031
ED Entered STN: 23 Mar 2005
TI Low-refractive-index dye-aggregate films with small absorption based on anomalous dispersion
AU Wakamatsu, Takashi; Watanabe, Keita; Saito, Kazuhiro
CS National College of Technology, Hitachinaka-shi, Ibaraki, 312-8508, Japan
SO Applied Optics (2005), 44(6), 906-911
CODEN: APOPAI; ISSN: 0003-6935
PB Optical Society of America
DT Journal
LA English
CC 73-4 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 41
AB ***Complex*** -refractive-index spectra of ***Squarylium*** (SQ) dye-aggregate films deposited upon ***metal*** films were studied by measurements of properties of the films including absorption spectra (AS) and attenuated total reflection. ***Complex*** refractive indexes are estd. by Kramers-Kronig anal. for the AS and by a theor. curve-fitting anal. for attenuated total reflection. The dye-aggregate films exhibited an absorption that was blueshifted from that of a monomer, of the H-aggregate formation of SQ mols., and had a changing refractive index with anomalous dispersion about the H-absorption band. From both measurements of the SQ films there is a region of low absorption in the short-wavelength side of the absorption band and the refractive index there is lower than that of glass.
ST refractive index ***squarylium*** dye aggregate film absorption anomalous dispersion
IT Dyes
(-aggregate low-refractive-index films with small absorption based on anomalous dispersion)
IT Aggregates
(- ***squarylium*** dye low-refractive-index films with small absorption based on anomalous dispersion)

IT ***Optical*** dispersion
(low-refractive-index ***squarylium*** dye-aggregate films with small absorption based on anomalous)
IT Refractive index
(of ***squarylium*** dye-aggregate films with small absorption based on anomalous dispersion)
IT ATR (attenuated total reflection)
UV and visible spectra
(of ***squarylium*** dye-aggregate low-refractive-index films with small absorption based on anomalous dispersion)
IT 118418-01-2
RL: PRP (Properties)
(-aggregate low-refractive-index films with small absorption based on anomalous dispersion)
IT 7440-22-4, Silver, properties
RL: PRP (Properties)
(aggregate- ***squarylium*** dye low-refractive-index films with small absorption based on anomalous dispersion)
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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L6 ANSWER 16 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:160706 CAPLUS <<LOGINID::20060727>>
DN 142:269519
ED Entered STN: 25 Feb 2005
TI Film for plasma display filter and plasma display filter comprising the same
IN Lee, Yeon-Keun; Park, Sang-Hyun; Kim, Jung-Doo; Choi, Hyun-Seok; Hwang, In-Seok; Lee, Dong-Wook
PA LG CHEM, LTD., S. Korea
SO U.S. Pat. Appl. Publ., 12 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM G03F009-00
INCL 430007000
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41, 73
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005042531	A1	20050224	US 2004-920627	20040818
WO 2005017579	A1	20050224	WO 2004-KR2049	20040816
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CN 1701249	A	20051123	CN 2004-80001092	20040816
JP 2006514339	T2	20060427	JP 2005-518228	20040816

EP 1656572 A1 20060517 EP 2004-748542 20040816
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
PRAI KR 2003-57206 A 20030819
KR 2004-53382 A 20040709
WO 2004-KR2049 W 20040816

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005042531	ICM	G03F009-00
	INCL	430007000
	IPCI	G03F0009-00 [ICM,7]
	IPCR	G02B0005-20 [I,A]; G02B0005-20 [I,C*]; G02B0005-22 [I,A]; G02B0005-22 [I,C*]
	NCL	430/007.000
	ECLA	G02B005/20V; G02B005/22D
WO 2005017579	IPCI	G02B0005-20 [ICM,7]
	IPCR	G02B0005-20 [I,A]; G02B0005-20 [I,C*]; G02B0005-22 [I,A]; G02B0005-22 [I,C*]
CN 1701249	IPCI	G02B0005-20 [ICM,7]; G02B0005-22 [ICS,7]
JP 2006514339	IPCI	G02B0005-22 [I,A]; G09F0009-00 [I,A]
	FTERM	2H048/CA04; 2H048/CA05; 2H048/CA12; 2H048/CA14; 2H048/CA19; 2H048/CA23; 5G435/AA02; 5G435/AA04; 5G435/AA17; 5G435/BB06; 5G435/GG11; 5G435/HH02; 5G435/KK07; 5G435/LL04
EP 1656572	IPCI	G02B0005-20 [ICM,7]; G02B0005-22 [ICS,7]

OS MARPAT 142:269519

AB Disclosed is a film for a plasma display filter comprising a binder resin selected from the group consisting of a polyvinyl chloride resin (PVC), a chlorinated polyvinyl chloride resin (CPVC), and a mixt. thereof; and a dye selected from the group consisting of a near IR absorbing dye, a neon-cut dye, a color control dye and mixts. thereof, which enables integration of a near IR absorbing film and a neon-cut film, experiences less transmittance change at high temp. and humidity, has superior durability and thermal stability, and has a high transmittance in the visible region, and a plasma display filter comprising the same.

ST plasma display filter diimmonium ***squarylium*** salt dye polyvinyl chloride

IT Dyes
(diimmonium salt; film for plasma display filter from)

IT ***Optical*** filters
Plasma display panels
(film for plasma display filter from)

IT 7440-02-0D, Nickel, ***complex*** , dithiol-based
RL: DEV (Device component use); USES (Uses)
(dye; film for plasma display filter from)

IT 9002-86-2, PVC
RL: DEV (Device component use); USES (Uses)
(film for plasma display filter from)

L6 ANSWER 17 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:134368 CAPLUS <<LOGINID::20060727>>
DN 142:384561
ED Entered STN: 17 Feb 2005
TI Selective Calcium Ion Sensing with a Bichromophoric ***Squaraine*** Foldamer
AU Arunkumar, Easwaran; Ajayaghosh, Ayyappanpillai; Daub, Joerg
CS Photosciences and Photonics Division, Regional Research Laboratory (CSIR), Trivandrum, 695019, India
SO Journal of the American Chemical Society (2005), 127(9), 3156-3164
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
CC 79-3 (Inorganic Analytical Chemistry)
OS CASREACT 142:384561

AB Several ***squaraine*** tethered bichromophoric podand systems 1a-d and a monochromophoric analog 2 were prepd. and characterized. Among these, the bichromophore, 1b, contg. five oxygen atoms in the flexible podand moiety was found to specifically bind Ca2+ in the presence of other ***metal*** ions such as K+, Na+, and Mg2+. The selective binding of Ca2+ is clear from the absorption and emission spectral changes as well as

by the visual color change of 1b from light-blue to an intense purple-blue. Benesi-Hildebrand and Job plots confirmed a 1:1 binding between 1b and Ca2+. Signaling of the binding event is achieved by the cation-induced folding of the bichromophore and the resultant exciton coupling between the ***squaraine*** chromophores. The monochromophoric ***squaraine*** dye 2 failed to give ***optical*** signals upon Ca2+ binding, due to the absence of exciton interaction in the bound ***complex*** . Titrn. of the folded ***complex*** 9 with EDTA released the ***metal*** ion from the ***complex*** , thereby regaining the original absorption and emission properties of the bichromophore. The ***squaraine*** foldamer 1b reported here is the 1st example of a selective chromogenic Ca2+ sensor, which works on the principle of exciton interaction in the folded Ca2+ ***complex*** of a bichromophore, the ***optical*** properties of which are similar to those of the H-type aggregates of analogous ***squaraine*** dyes.

ST calcium sensing bichromophoric ***squaraine*** foldamer

IT Chromophores
(bichromophores; calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT Absorption spectra
Conformation
Emission spectra
Ion selectivity
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT Podands
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 7440-70-2, Calcium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 78675-98-6D, ***Squaraine*** , derivs.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 452067-50-4P
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 849667-85-2P 849667-86-3P 849667-87-4P
RL: ARU (Analytical role, unclassified); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 849667-84-1P
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 93-90-3, 2-(Methylphenylamino)ethanol 19249-03-7 37860-51-8 41024-91-3 42749-27-9 80755-67-5 107885-39-2, 3-(4'-Dimethylaminophenyl)-4-hydroxy-3-cyclobutene-1,2-dione
RL: RCT (Reactant); RACT (Reactant or reagent)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 452067-49-1P 849667-80-7P 849667-81-8P 849667-82-9P 849667-83-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

RE.CNT 109 THERE ARE 109 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L6 ANSWER 18 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:1014026 CAPLUS <<LOGINID::20060727>>
DN 141:429711
ED Entered STN: 25 Nov 2004
TI ***Optical*** recording material containing ***metal*** ***chelate*** and arylamine, recording method, and apparatus
IN Noguchi, Takashi; Sato, Tsutomu; Tomura, Tatsuya; Ueno, Yasunobu; Shimizu, Ikuo; Kinugasa, Motoharu; Toyota, Hiroshi
PA Ricoh Co., Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Oil and Fat Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 32 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B41M005-26
ICS G11B007-24; C09B023-00; C09B050-06; C09B050-10; C09B053-00; C09B057-00
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 28
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004330459	A2	20041125	JP 2003-125849	20030430
	US 2004265645	A1	20041230	US 2004-836854	20040430
	US 6936323	B2	20050830		
PRAI	JP 2003-125849	A	20030430		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004330459	ICM	B41M005-26
	ICS	G11B007-24; C09B023-00; C09B050-06; C09B050-10; C09B053-00; C09B057-00
	IPCI	B41M0005-26 [ICM,7]; G11B0007-24 [ICS,7]; C09B0023-00 [ICS,7]; C09B0050-06 [ICS,7]; C09B0050-10 [ICS,7]; C09B0050-00 [ICS,7,C*]; C09B0053-00 [ICS,7]; C09B0057-00 [ICS,7]
	IPCR	B32B0003-02 [I,A]; B32B0003-02 [I,C*]; B32B0005-16 [I,A]; B32B0005-16 [I,C*]; B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [N,A]; C09B0023-00 [N,C*]; C09B0050-00 [N,C*]; C09B0050-06 [N,A];

C09B0050-10 [N,A]; C09B0053-00 [N,A]; C09B0053-00
[N,C*]; C09B0057-00 [N,A]; C09B0057-00 [N,C*];
G11B0007-24 [I,A]; G11B0007-24 [I,C*]
FTERM 2H111/EA03; 2H111/FA01; 2H111/FA12; 2H111/FA23;
2H111/FB42; 2H111/FB48; 4H056/CA01; 4H056/CC02;
4H056/CC08; 4H056/CD01; 4H056/CE03; 4H056/CE06;
4H056/DD03; 4H056/DD06; 4H056/EA16; 4H056/FA06;
5D029/JA04; 5D029/JC05; 5D029/WA01; 5D029/WB11;
5D029/WB14; 5D029/WC01
US 2004265645 IPCI B32B0005-16 [ICM,7]
IPCR B32B0003-02 [I,A]; B32B0003-02 [I,C*]; B32B0005-16
[I,A]; B32B0005-16 [I,C*]; B41M0005-26 [I,A];
B41M0005-26 [I,C*]; C09B0023-00 [N,A]; C09B0023-00
[N,C*]; C09B0050-00 [N,C*]; C09B0050-06 [N,A];
C09B0050-10 [N,A]; C09B0053-00 [N,A]; C09B0053-00
[N,C*]; C09B0057-00 [N,A]; C09B0057-00 [N,C*];
G11B0007-24 [I,A]; G11B0007-24 [I,C*]
NCL 428/821.000
ECLA C09B067/00M1; G11B007/246; G11B007/249
OS MARPAT 141:429711
AB The material has a recording layer contg. (A) formazan ***metal*** ***chelate*** , (B) ***squarylium*** ***metal*** ***chelate*** , and (C) diarylamine compd. and recording app. uses the material. The material is recored by light with 600-720 nm wavelength. The material is suited for write-once read many recoding using semiconductor ***laser*** beam, and shows stable reflectivity and modulation.
ST ***optical*** WORM disk semiconductor ***laser*** beam; formazan ***squarylium*** ***metal*** ***chelate*** ***optical*** recording material; diaryl amine ***optical*** recording material
IT ***Optical*** recording materials
(***optical*** recording material contg. formazan ***metal*** ***chelate*** , ***squarylium*** ***metal*** ***chelate*** , and diarylamine compd.)
IT ***Optical*** disks
(write-once read-many; ***optical*** recording material contg. formazan ***metal*** ***chelate*** , ***squarylium*** ***metal*** ***chelate*** , and diarylamine compd.)
IT 36666-44-1 345233-02-5D, ***complex*** with aluminum 345233-06-9D, ***complex*** with aluminum 463945-11-1D, ***complex*** with Cu 478535-02-3D, ***complex*** with ni 478535-04-5D, ***complex*** with Co 478535-07-8D, ***complex*** with Cu 478535-09-0D, ***complex*** with FeCl3 478628-95-4D, ***complex*** with aluminum 478628-97-6D, ***complex*** with aluminum 478629-06-0D, ***complex*** with aluminum 573713-74-3D, ***complex*** with VCl3 573713-77-6D, ***complex*** with Ni 573713-79-8D, ***complex*** with Co 573713-85-6D, ***complex*** with Ni 577740-94-4D, ***complex*** with aluminum 796072-43-0D, ***complex*** with Co 796072-49-6D, ***complex*** with aluminum 796072-52-1 796072-54-3 796072-56-5 796072-58-7 796072-60-1 796072-62-3 796072-64-5 796072-66-7 796072-67-8
RL: TEM (Technical or engineered material use); USES (Uses)
(***optical*** recording material contg. formazan ***metal*** ***chelate*** , ***squarylium*** ***metal*** ***chelate*** , and diarylamine compd.)

L6 ANSWER 19 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:982995 CAPLUS <<LOGINID::20060727>>
ED Entered STN: 17 Nov 2004
TI Design and Synthesis of a ***Squaraine*** Dye for Long Wavelength Fluorescence-Based Biosensors
AU Pitner, J. Bruce; Thomas, Joseph; Sherman, Douglas B.; Alarcon, Javier; Mohiuddin, Ghulam; Kyler, Keith S.; Venepalli, Bhaskar R.
CS BD Technologies, Research Triangle Park, NC, 27709, USA
SO Abstracts, 56th Southeast Regional Meeting of the American Chemical Society, Research Triangle Park, NC, United States, November 10-13 (2004), GEN-360 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69FWAQ
DT Conference; Meeting Abstract
LA English
AB The design and synthesis of a novel long wavelength fluorescing ***squaraine*** dye for conjugation to proteins will be discussed. Environmentally sensitive dyes are highly desired for probing

environmental changes that occur when specific proteins bind their corresponding ***ligands*** . Long wavelength (>650 nm) dyes would enable through-skin wireless sensing with min. interference from the background. While several environmentally sensitive dyes are known in the visible spectrum, only few are available in the long wavelength region, and none of them are available with reactive groups suitable for protein conjugation. Several derivs. of ***squaraine*** dyes are known to be environmentally sensitive and fluorescent in the long wavelength region, but none of them are available with linkers for protein conjugation. In order to achieve this goal, we developed a synthetic scheme to introduce a reactive linker onto an anilinic ***squaraine*** that is highly sensitive to its environment. The synthesis involves the prepn. of the dye with an iodoacetyl ester linker that readily reacts with a thiol on a cysteine residue of the binding protein. The ***squaraine*** dye was conjugated to known binding proteins that were evaluated as ***optical*** sensors. Our long-term goal is to develop novel non-enzymic fluorescence detection methods for continuous monitoring of analytes. Ultimately, we expect these systems to measure analytes in the body and transmit ***information*** through the skin to an external monitor. Our proposed long-term continuous monitoring systems will have several advantages over presently available systems.

L6 ANSWER 20 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:80987 CAPLUS <<LOGINID::20060727>>
DN 140:130469
ED Entered STN: 01 Feb 2004
TI Novel methods and compositions for improved electrophoretic display performance
IN Wu, Zarng-arh George; Haubrich, Jeanne E.; Wang, Xiaojia; Liang, Rong-chang
PA Sipix Imaging, Inc., USA
SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G02F001-00
CC 48-7 (Unit Operations and Processes)
Section cross-reference(s): 29, 35, 38, 74, 76
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004010206	A2	20040129	WO 2003-US21681	20030710
	WO 2004010206	A3	20040408		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CN 1469177	A	20040121	CN 2002-153622	20021127
	AU 2003249041	A1	20040209	AU 2003-249041	20030710
	EP 1529242	A2	20050511	EP 2003-765534	20030710
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2005533289	T2	20051104	JP 2004-523103	20030710
PRAI	US 2002-396680P	P	20020717		
	WO 2003-US21681	W	20030710		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004010206	ICM	G02F001-00
	IPCI	G02F0001-00 [ICM,7]
	IPCR	G02F0001-01 [I,C*]; G02F0001-167 [I,A]
	ECLA	G02F001/167
CN 1469177	IPCI	G02F0001-167 [ICM,7]; G02F0001-01 [ICM,7,C*]; G09F0009-37 [ICS,7]
	IPCR	G02F0001-01 [I,C*]; G02F0001-167 [I,A]
	ECLA	G02F001/167

AU 2003249041 IPCI G02F0001-00 [ICM,7]
EP 1529242 IPCI G02F0001-167 [ICM,7]; G02F0001-01 [ICM,7,C*]
IPCR G02F0001-01 [I,C*]; G02F0001-167 [I,A]
JP 2005533289 IPCI G02F0001-167 [ICM,7]; G02F0001-17 [ICS,7]; G02F0001-01 [ICS,7,C*]

AB The invention is directed to novel methods and compns. useful for improving the performance of electrophoretic displays. The methods comprise adding a high absorbance dye or pigment, or conductive particles or a charge transport material into an electrode protecting layer of the display.

ST electrophoretic display dye pigment conducting particle polymer sealant adhesive; electrophotog photoconductor photoreceptor coated electrode

metal ***complex*** oxide organometallic

IT Oxidation potential
(<1.4 V (vs. SCE) for hole transport materials; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Isoalkanes
RL: NUU (Other use, unclassified); USES (Uses)
(C7-10; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Cyanine dyes
(Naphthalo, ***metal*** ***complexes*** ; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT UV absorption
(UV-visible, of dyes and pigments; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Carbon black, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(Vulcan XC-72, composite sealant with Kraton G-R 6919 and Kraton G 1650; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polysiloxanes, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(acrylates, Ebecryl 1360; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polysiloxanes, uses
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(acrylates, microcup polymer, laminated with primer-coated ITO/PET film; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Ketones, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(alkadienyl; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Nitriles, uses
Nitro compounds
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(and oligomers and polymers of; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Amines, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(arom.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Isoprene-styrene rubber
Polymers, uses
Styrene-butadiene rubber, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(block, triblock; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Synthetic rubber, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(butadiene-isoprene-styrene, hydrogenated, block, composite sealant with Kraton G 1650 and Carb-O-Sil or carbon black; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metalloporphyrins
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(cobalt; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Acrylic polymers, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(cyano-contg.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Isocyanates
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(di- and poly- monomers, polymers contg.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Adhesives
Coating materials
Crosslinking
Dyes
Electric conductors
Electrodes
Electrophotographic apparatus
Electrophotographic photoconductors (photoreceptors)
Embossing
Lamination
Pigments, nonbiological
Sealing compositions
(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Thermoplastic rubber
RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Alkadienes
Enamines
Epoxy resins, uses
Hydrazones
Metals , uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Diazo compounds
Metallophthalocyanines
Metalloporphyrins
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for

improved electrophoretic display performance)

IT Oxides (inorganic), uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(elec. conductive; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Carbonaceous materials (technological products)
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(elec. conductor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT ***Optical*** imaging devices
(electrophoretic; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polyurethanes, uses
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(encapsulated TiO2; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polyesters, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(film coated with ITO; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Styrene-butadiene rubber, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(hydrogenated, block, triblock, Kraton G 1650, composite with Kraton G-R 6919/Carb-O-Sil or Carbon black; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Engineering
(inventions; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Epoxides
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(mono- and multifunctional oligomers and polymers contg.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Azo dyes
(monoazo, diazo, and polyazo; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Allylic compounds
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(multifunctional monomers, polymers of; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metalloporphyrins
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(nickel, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Heterocyclic compounds
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(nitrogen, five-membered, triazoles; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Alloys, uses
RL: DEV (Device component use); TEM (Technical or engineered material

use); USES (Uses)
(nonferrous; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT IR absorption
(of dyes and pigments; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Electrophoresis apparatus
(***optical*** imaging; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polymerization
(photopolymn.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Transition ***metal*** ***complexes***
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(phthalocyanine, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Vinyl compounds, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(polymers, from multifunctional monomers; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Vanadyl ***complexes***
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(porphyrin, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Plastics, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(thermoplastics; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Epoxides
Polyamides, reactions
Polycarbonates, reactions
Polyesters, reactions
Polyethers, reactions
Polyurethanes, reactions
Polyvinyl butyrals
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Plastics, uses
RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(thermosetting; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metallophthalocyanines
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(transition ***metal*** ***complexes*** , dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metalloporphyrins
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(vanadyl, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Nitrile rubber, processes

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(vinyl group-terminated, Hycar 1300-43; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Ethers, reactions
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(vinyl, polymers, oligomers and polymers contg., thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Ethers, reactions
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(vinyl, thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 4687-94-9, Ebecryl 600
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(Bisphenol A-contg. diacrylate; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 13048-33-4, 1,6-Hexanediol diacrylate
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(HDODA; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 75081-21-9, ITX
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(ITX; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 50926-11-9, Indium tin oxide
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(PET film coated with; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 60506-81-2, SR 399
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(a tetraacrylate; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 41484-35-9, Irganox 1035
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(bis (hindered phenol thioether); dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 138184-94-8, Cab-O-Sil TS 720
RL: TEM (Technical or engineered material use); USES (Uses)
(composite sealant with Kraton G-R 6919 and Kraton G 1650; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 65181-78-4, N,N'-Bis(3-methylphenyl)-N-N'-diphenylbenzidine
RL: DEV (Device component use); USES (Uses)
(dye, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 12227-55-3, Orasol Red BL 12237-23-9, Orasol Black CN 61931-55-3, Orasol Yellow 2GLN
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(dye, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 56996-93-1, Sudan Black 61901-87-9, Orasol Black RLI 71799-11-6, Orasol Blue GL
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(dye, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 14916-87-1, FC 3275
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(dye; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 77-58-7, Dibutyltin dilaurate
RL: CAT (Catalyst use); USES (Uses)
(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 78-93-3, Methyl ethyl ketone, uses
RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)
(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 147-14-8D, Copper phthalocyanine, derivs. 7429-90-5D, Aluminum, phthalocyanine or naphthalocyanine ***complexes*** 7439-89-6D, Iron, phthalocyanine or naphthalocyanine ***complexes*** 7439-92-1D, Lead, phthalocyanine or naphthalocyanine ***complexes*** 7439-95-4, Magnesium, processes 7440-02-0D, Nickel, naphthalocyanine derivs. ***complexes*** 7440-31-5D, Tin, phthalocyanine or naphthalocyanine ***complexes*** 7440-32-6D, Titanium, naphthalocyanine derivs. ***complexes*** 7440-43-9D, Cadmium, phthalocyanine or naphthalocyanine ***complexes*** 7440-48-4D, Cobalt, naphthalocyanine derivs. ***complexes*** 7440-62-2D, Vanadium, phthalocyanine or naphthalocyanine ***complexes*** 7440-66-6D, Zinc, phthalocyanine or naphthalocyanine ***complexes*** 7440-74-6D, Indium, phthalocyanine or naphthalocyanine ***complexes*** 78675-98-6D, ***Squaraine*** , derivs.
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 9003-42-3, Poly(ethyl methacrylate)
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 74-82-8D, Methane, triaryl derivs. 81-33-4 85-83-6, Sudan IV 85-86-9, Sudan III 86-74-8D, Carbazole, derivs. 92-52-4D, Biphenyl, derivs. 129-79-3, 2,4,7-Trinitro-9-fluorenone 288-42-6D, Oxazole, derivs. 288-99-3D, 1,3,4-Oxadiazole, 2,5-bis(4-N,N'-dialkylaminophenyl) 486-25-9, Fluorenone 486-25-9D, Fluorenone, oligomers and polymers of 809-73-4 842-07-9, Sudan yellow 966-88-1D, Benzaldehyde-N,N-diphenylhydrazone, p-dialkylamino derivs. 1159-53-1 1229-55-6, Sudan R 1450-63-1, 1,1,4,4-Tetraphenylbutadiene 1484-96-4 1518-16-7 2085-33-8 2417-00-7 2455-14-3 2491-91-0, 2,5-Bis(4-methylphenyl)-1,3,4-oxadiazole 3118-97-6, Sudan II 4197-25-5, Sudan Black B 5152-94-3 7429-90-5, Aluminum, uses 7429-90-5D, Aluminum, alloys 7439-89-6, Iron, uses 7439-89-6D, Iron, alloys 7440-02-0D, Nickel, alloys 7440-22-4, Silver, uses 7440-22-4D, Silver, alloys 7440-50-8, Copper, uses 7440-50-8D, Copper, alloys 7440-57-5, Gold, uses 7440-57-5D, Gold, alloys 7440-74-6, Indium, uses 7440-74-6D, Indium, alloys 7782-42-5, Graphite, uses 9003-39-8, Polyvinylpyrrolidone 9003-55-8, Styrene-butadiene copolymer 11120-54-0D, Oxadiazole, derivs. 12673-86-8, Antimony tin oxide 14705-63-6 14705-63-6D, alkylated and alkoxylated derivs. 14752-00-2 15546-43-7, N,N,N',N'-

Tetraphenylbenzidine 20441-06-9 23467-27-8 24937-78-8, Ethylene-vinyl acetate copolymer 26009-24-5, Poly(p-phenylene vinylene) 33200-26-9 35079-58-4 35458-94-7 36118-45-3D, Pyrazoline, Ph dialkylaminostyrene dialkylaminophenyl derivs. 36118-45-3D, Pyrazoline, derivs. 41584-66-1 43134-09-4 51325-95-2 58280-31-2 58328-31-7, 4,4'-Bis(carbazol-9-yl)biphenyl 58473-78-2 59765-31-0 59869-79-3 69361-50-8D, bis(4-N,N-dialkylamino) 75232-44-9 76185-65-4 82532-76-1 83992-95-4 85171-94-4 89114-90-9 89114-91-0 89991-16-2 93376-18-2, (4-Butoxycarbonyl-9-fluorenylidene)malononitrile 93975-08-7 93975-09-8 94665-89-1 95270-88-5, Polyfluorene 95993-52-5 96492-45-4 97671-90-4 103079-11-4 105389-36-4, 4,4',4''-Tris(N,N-diphenylamino)triphenylamine 117944-65-7, Indium zinc oxide 123847-85-8 126213-51-2, Poly(3,4,-ethylenedioxythiophene) 127022-77-9, Hexakis(benzylthio)benzene 138171-14-9 138372-67-5 139092-78-7 139255-17-7 141752-82-1 142289-08-5 150405-69-9 154896-84-1 164534-25-2 174493-15-3 182507-83-1 184101-39-1 185690-39-5, 4,4',4''-Tris[N-(1-naphthyl)-N-phenylamino]triphenylamine 203799-76-2 254435-83-1, Sudan Blue 376386-75-3 482654-95-5 649735-34-2 649735-35-3 649735-37-5D, 2,5-bis(4-dialkylaminophenyl) derivs. 649735-38-6 650609-45-3 650609-46-4 650609-47-5 650609-48-6

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 68-12-2, Dimethylformamide, uses 108-21-4, Isopropyl acetate 108-88-3, Toluene, uses 110-54-3, Hexane, uses 141-78-6, Ethyl acetate, uses

RL: NUU (Other use, unclassified); USES (Uses)

(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 650634-86-9, Duro-Tak 1105

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 6712-98-7 15625-89-5, Trimethylolpropane triacrylate 165169-07-3, Desmodur N 3400 601484-87-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 198-55-0, Perylene 488-86-8D, Croconic acid, amine derivs. 3317-67-7, Cobalt phthalocyanine 12226-78-7, C.I.Solvent Blue 67 14055-02-8D, Nickel phthalocyanine, derivs. 14172-92-0, Nickel tetraphenylporphine 33273-09-5D, derivs. 52324-93-3, Titanium phthalocyanine

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 650609-44-2P

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)

(electrophoretic TiO2 encapsulant; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 13463-67-7, R900, uses

RL: DEV (Device component use); USES (Uses)

(encapsulated with electrophoretic polymer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 25038-59-9, PET, processes

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(film coated with ITO; dyes, pigments, crosslinking sealants and

adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 119313-12-1, Irgacure 369
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(initiator; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 105729-79-1 700836-36-8
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(isoprene-styrene rubber, block, triblock; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 7440-02-0, Nickel, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(microcup base template; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 4687-94-9DP, Ebecryl 600, polymers contg. 13048-33-4DP, HDDA, polymers contg. 15625-89-5DP, TMPTA, polymers contg. 60506-81-2DP, SR 399, polymers contg.
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(microcup polymer, laminated with primer-coated ITO/PET film; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 9003-18-3
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(nitrile rubber, vinyl group-terminated, Hycar 1300-43; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 12047-27-7, K-Plus 16, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(pigment, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 115452-84-1, Disperbyk 163
RL: MOA (Modifier or additive use); USES (Uses)
(polymeric dispersant; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 649735-33-1P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(primer coating for ITO/PET film; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 106107-54-4 694491-73-1
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(styrene-butadiene rubber, block, triblock; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 53568-48-2, Disperse-Ayd 6
RL: MOA (Modifier or additive use); USES (Uses)
(surfactant; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 79-10-7D, Acrylic acid, multifunctional and multi- esters, oligomers and polymers contg. 79-10-7D, Acrylic acid, multifunctional esters 79-41-4D, Methacrylic acid, multifunctional and multi- esters, oligomers and polymers contg. 79-41-4D, Methacrylic acid, multifunctional esters 100-42-5D, Styrene, derivs. 100-42-5D, Styrene, oligomers and polymers contg. 9003-01-4D, Polyacrylic acid, alkyl esters 9004-36-8, Cellulose acetate butyrate 25087-26-7D, Polymethacrylic acid, alkyl esters
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT

(Reactant or reagent); USES (Uses)
(thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 477290-74-7, Galden HT 200
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(tri-hydric amino alc.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

L6 ANSWER 21 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:875484 CAPLUS <<LOGINID::20060727>>
DN 139:361233
ED Entered STN: 07 Nov 2003
TI Bis-transition- ***metal*** - ***chelate*** -probes
IN Ebright, Richard H.; Ebright, Yon W.
PA Rutgers, the State of University of New Jersey, USA
SO PCT Int. Appl., 80 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N
CC 9-16 (Biochemical Methods)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003091689	A2	20031106	WO 2002-US236180	20021112
	WO 2003091689	A3	20041223		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2488819	AA	20031106	CA 2002-2488819	20021112
	AU 2002367810	A1	20031110	AU 2002-367810	20021112
	EP 1506402	A2	20050216	EP 2002-807321	20021112
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	US 2004096887	A1	20040520	US 2003-665227	20030917
	US 6919333	B2	20050719		
	US 2005031545	A1	20050210	US 2004-946786	20040921
PRAI	US 2002-367775P	P	20020328		
	US 2002-410267P	P	20020913		
	WO 2002-US36180	W	20021112		
	US 2003-665227	A2	20030917		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003091689	ICM	G01N
	IPCI	G01N [ICM,7]
	IPCR	C07D0209-00 [I,C*]; C07D0209-14 [I,A]
	ECLA	C07D209/14
CA 2488819	IPCI	C07F0015-04 [ICM,7]; C07F0015-06 [ICS,7]; C07F0015-00 [ICS,7,C*]; C07F0001-08 [ICS,7]; C07F0001-00 [ICS,7,C*]; C07D0209-14 [ICS,7]; C07D0209-00 [ICS,7,C*]; G01N0033-53 [ICS,7]; G01N0033-532 [ICS,7]; G01N0033-542 [ICS,7]; G01N0033-536 [ICS,7,C*]; G01N0033-543 [ICS,7]; G01N0033-58 [ICS,7]
	IPCR	C07D0209-00 [I,C*]; C07D0209-14 [I,A]
	ECLA	C07D209/14
AU 2002367810	IPCI	G01N0033-532 [ICM,7]; C07D0209-14 [ICS,7]; C07D0209-00 [ICS,7,C*]
	IPCR	C07D0209-00 [I,C*]; C07D0209-14 [I,A]
EP 1506402	IPCI	G01N0033-532 [ICM,7]; C07D0209-14 [ICS,7]; C07D0209-00 [ICS,7,C*]
	IPCR	C07D0209-00 [I,C*]; C07D0209-14 [I,A]

US 2004096887 IPCI C12Q0001-68 [ICM,7]; G01N0033-53 [ICS,7]; C07F0003-06 [ICS,7]; C07F0003-00 [ICS,7,C*]; C07F0005-00 [ICS,7]; C07F0015-04 [ICS,7]; C07F0015-06 [ICS,7]; C07F0015-00 [ICS,7,C*]
IPCR C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]; G01N0033-533 [I,A]; G01N0033-533 [I,C*]
NCL 435/006.000
ECLA C12Q001/68B2H+563/113; G01N033/533
US 2005031545 IPCI A61K0051-00 [ICM,7]
IPCR C07D0209-00 [I,C*]; C07D0209-14 [I,A]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]; G01N0033-533 [I,A]; G01N0033-533 [I,C*]
NCL 424/009.365
ECLA C07D209/14; C12Q001/68B2H+563/113; G01N033/533

OS MARPAT 139:361233

AB A probe for labeling a target material is provided including two transition- ***metal*** ***chelates*** and detectable group. The probe has the general structural formula (I) wherein: (a) Y and Y' are each a transition ***metal*** , (b) R1 and R1 are each independently CH(COO-), CH(COOH), or absent; (c)R2 and R2 are linkers each having a length of from about 3.0 to about 20 A; and (d) X is a detectable group. The linkers may be linear or branched, may contain arom. moieties, and may optionally be further substituted. Methods of use of the probe in detecting and analyzing target materials of interest also are provided.

ST bis transition ***metal*** ***chelate*** probe

IT Proteins
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(-protein binding; bis-transition- ***metal*** - ***chelate*** -probes)

IT Functional groups
(Alkoxyl; bis-transition- ***metal*** - ***chelate*** -probes)

IT Probes (nucleic acid)
RL: ANT (Analyte); ANST (Analytical study)
(Bis-transition- ***metal*** - ***chelate*** -probes; bis-transition- ***metal*** - ***chelate*** -probes)

IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CAP (catabolite gene activator protein), hexahistidine tagged; bis-transition- ***metal*** - ***chelate*** -probes)

IT Molecules
(Cleavage agents; bis-transition- ***metal*** - ***chelate*** -probes)

IT Functional groups
(Detectable; bis-transition- ***metal*** - ***chelate*** -probes)

IT Laboratory ware
(Flow cell; bis-transition- ***metal*** - ***chelate*** -probes)

IT Energy transfer
(Fluorescent; bis-transition- ***metal*** - ***chelate*** -probes)

IT Atoms
(Heavy; bis-transition- ***metal*** - ***chelate*** -probes)

IT Atoms
(Paramagnetic; bis-transition- ***metal*** - ***chelate*** -probes)

IT Molecules
(Photosensitizers; bis-transition- ***metal*** - ***chelate*** -probes)

IT Self-association
(Protein; bis-transition- ***metal*** - ***chelate*** -probes)

IT Fluorometry
(anisotrophy; bis-transition- ***metal*** - ***chelate*** -probes)

IT Affinity
Alkyl groups
Animal tissue
Aryl groups
Biological materials
Capillary tubes
Carboxyl group
Cell
Chelating agents
Chemical formula
Chromophores
Concentration (condition)

Conformational transition
Coupling reaction
Crosslinking agents
Cuvettes
Cyanine dyes
Fluorescence
Fluorescence quenching
Fluorescence resonance energy transfer
Fluorescent dyes
Fluorescent substances
Gels
Immobilization, molecular or cellular
Isotope indicators
Labels
Length
Linking agents
Luminescent substances
Materials
Membrane, biological
Methyl group
Microtiter plates
Molecules
NMR spectroscopy
Optical absorption
Organ, animal
Phosphorescent substances
Protein sequences
Reaction
Solids
Solutions
Spin labels
Surface
Synthesis
Synthons
Tautomers
Test kits
Test tubes
Washing
(bis-transition- ***metal*** - ***chelate*** -probes)

IT Peptides, analysis
Proteins
Transition ***metal*** compounds
RL: ANT (Analyte); ANST (Analytical study)
(bis-transition- ***metal*** - ***chelate*** -probes)

IT Haptens
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(bis-transition- ***metal*** - ***chelate*** -probes)

IT Isotopes
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(bis-transition- ***metal*** - ***chelate*** -probes)

IT Thiols, uses
RL: NUU (Other use, unclassified); USES (Uses)
(bis-transition- ***metal*** - ***chelate*** -probes)

IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(bis-transition- ***metal*** - ***chelate*** -probes)

IT Hydrazides
RL: RCT (Reactant); RACT (Reactant or reagent)
(bis-transition- ***metal*** - ***chelate*** -probes)

IT Fluorometry
(correlation; bis-transition- ***metal*** - ***chelate*** -probes)

IT Thiols, uses
RL: NUU (Other use, unclassified); USES (Uses)
(dithiols, Low-mol.-wt.; bis-transition- ***metal*** - ***chelate*** -probes)

IT Fluorometry
(emission; bis-transition- ***metal*** - ***chelate*** -probes)

IT Alkyl groups
(ethyl group; bis-transition- ***metal*** - ***chelate*** -probes)

IT Fluorometry
(lifetime; bis-transition- ***metal*** - ***chelate*** -probes)

IT Chromatography

(matrix; bis-transition- ***metal*** - ***chelate*** -probes)
IT Fluorometry
(polarization, polarization; bis-transition- ***metal*** - ***chelate*** -probes)
IT Hydroxyl group
(probes contg.; bis-transition- ***metal*** - ***chelate*** -probes)
IT Acids, uses
Aromatic compounds
Carboxylic acids, uses
Halogens
Salts, uses
Transition ***metals*** , uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(probes contg.; bis-transition- ***metal*** - ***chelate*** -probes)
IT Transition ***metal*** ***complexes***
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(probes; bis-transition- ***metal*** - ***chelate*** -probes)
IT Carboxylic acids, uses
Sulfonic acids, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(salts, probes contg.; bis-transition- ***metal*** - ***chelate*** -probes)
IT 71-00-1D, Histidine, compds. contg. 64134-30-1
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(bis-transition- ***metal*** - ***chelate*** -probes)
IT 64-19-7D, Acetic acid, probes contg., uses 7704-34-9D, Sulfur, probes contg. 7782-44-7D, Oxygen, probes contg. 14701-22-5D, probes contg., uses 15158-11-9D, probes contg., uses 22541-53-3D, probes contg., uses 23713-49-7D, Zincion, probes contg., uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(bis-transition- ***metal*** - ***chelate*** -probes)
IT 389059-73-8P 389059-74-9P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(bis-transition- ***metal*** - ***chelate*** -probes)
IT 50-00-0, Formaldehyde, reactions 90-47-1, Xanthenone 92-83-1, Xanthene 95-21-6, 2-Methylbenzoxazole 109-06-8, 2-Methylpyridine 120-75-2, 2-Methylbenzothiazole 135-67-1, Phenoxazine 1640-39-7, 2,3,3-Trimethylindole 2143-61-5, Propyl 2682-45-3 4808-69-9 6764-43-8 7718-54-9, Nickel chloride (NiCl2), reactions 20686-66-2 21431-16-3 41532-84-7 113995-55-4 129179-17-5 132557-72-3 146368-15-2 146397-20-8 157646-47-4 618886-23-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(bis-transition- ***metal*** - ***chelate*** -probes)
IT 618886-24-1P 618886-25-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(bis-transition- ***metal*** - ***chelate*** -probes)
IT 618886-25-2DP, derivs. 618886-26-3DP, derivs.
RL: SPN (Synthetic preparation); PREP (Preparation)
(bis-transition- ***metal*** - ***chelate*** -probes)
IT 78675-98-6, ***Squaraine***
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(dye; bis-transition- ***metal*** - ***chelate*** -probes)
IT 64134-28-7 64134-29-8 64134-31-2 64134-32-3 64134-33-4 148916-02-3 401796-60-9 620927-23-3
RL: PRP (Properties)
(unclaimed sequence; bis-transition- ***metal*** - ***chelate*** -probes)

L6 ANSWER 22 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:818463 CAPLUS <<LOGINID::20060727>>
DN 139:324209
ED Entered STN: 17 Oct 2003
TI Photopolymerizable compositions containing ***metal*** ***complexes*** of ***squarylium*** compounds
IN Yamaoka, Tsuguo; Shimizu, Ikuo; Toyoda, Hiroshi; Kinugasa, Motoharu; Ikuta, Masanori; Katagi, Kyoko
PA Kyowa Yuka Co., Ltd., Japan

SO PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM C08F002-50
ICS C09B023-04; C09B057-00; G03F007-029; C07D231-22; C07D403-08; C07D413-08; C07D417-08; C07D231-20; C07F003-00; C07F003-06; C07F005-06
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 42, 74
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003085005	A1	20031016	WO 2003-JP4254	20030403
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003236353	A1	20031020	AU 2003-236353	20030403
EP 1493757	A1	20050105	EP 2003-745891	20030403
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2005164120	A1	20050728	US 2003-508528	20030403
PRAI JP 2002-104616	A	20020408		
WO 2003-JP4254	W	20030403		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003085005	ICM	C08F002-50
	ICS	C09B023-04; C09B057-00; G03F007-029; C07D231-22; C07D403-08; C07D413-08; C07D417-08; C07D231-20; C07F003-00; C07F003-06; C07F005-06
	IPCI	C08F0002-50 [ICM,7]; C08F0002-46 [ICM,7,C*]; C09B0023-04 [ICS,7]; C09B0023-00 [ICS,7,C*]; C09B0057-00 [ICS,7]; G03F0007-029 [ICS,7]; C07D0231-22 [ICS,7]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*]; C07D0413-08 [ICS,7]; C07D0413-00 [ICS,7,C*]; C07D0417-08 [ICS,7]; C07D0417-00 [ICS,7,C*]; C07D0231-20 [ICS,7]; C07D0231-00 [ICS,7,C*]; C07F0003-00 [ICS,7]; C07F0003-06 [ICS,7]; C07F0005-06 [ICS,7]; C07F0005-00 [ICS,7,C*]
	IPCR	C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0403-00 [I,C*]; C07D0403-08 [I,A]; C07D0413-00 [I,C*]; C07D0413-06 [I,A]; C07D0413-08 [I,A]; C07D0417-00 [I,C*]; C07D0417-08 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
	ECLA	C07D417/08; C07D231/22; C07D261/12; C07D403/08; C07D413/06+261+209C; C07D413/08; C08F002/50; G03F007/029
AU 2003236353	IPCI	C08F0002-50 [ICM,7]; C08F0002-46 [ICM,7,C*]; C07D0413-08 [ICS,7]; C07D0413-00 [ICS,7,C*]; C07D0417-08 [ICS,7]; C07D0417-00 [ICS,7,C*]; C07D0231-20 [ICS,7]; C07F0003-00 [ICS,7]; C07F0003-06 [ICS,7]; C07F0005-06 [ICS,7]; C07F0005-00 [ICS,7,C*]; C09B0023-04 [ICS,7]; C09B0023-00 [ICS,7,C*]; C09B0057-00 [ICS,7]; G03F0007-029 [ICS,7]; C07D0231-22 [ICS,7]; C07D0231-00 [ICS,7,C*]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*]
	IPCR	C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0403-00 [I,C*]; C07D0403-08 [I,A]; C07D0413-00 [I,C*]; C07D0413-06 [I,A]; C07D0413-08 [I,A]; C07D0417-00 [I,C*]; C07D0417-08 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
EP 1493757	IPCI	C08F0002-50 [ICM,7]; C08F0002-46 [ICM,7,C*];

C09B0023-04 [ICS,7]; C09B0023-00 [ICS,7,C*];
C09B0057-00 [ICS,7]; G03F0007-029 [ICS,7]; C07D0231-22
[ICS,7]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*];
C07D0413-08 [ICS,7]; C07D0413-00 [ICS,7,C*];
C07D0417-08 [ICS,7]; C07D0417-00 [ICS,7,C*];
C07D0231-20 [ICS,7]; C07D0231-00 [ICS,7,C*];
C07F0003-00 [ICS,7]; C07F0003-06 [ICS,7]; C07F0005-06
[ICS,7]; C07F0005-00 [ICS,7,C*]
IPCR C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0403-00
[I,C*]; C07D0403-08 [I,A]; C07D0413-00 [I,C*];
C07D0413-06 [I,A]; C07D0413-08 [I,A]; C07D0417-00
[I,C*]; C07D0417-08 [I,A]; C08F0002-46 [I,C*];
C08F0002-50 [I,A]; G03F0007-029 [I,A]; G03F0007-029
[I,C*]
ECLA C07D417/08; C07D231/22; C07D261/12; C07D403/08;
C07D413/06+261+209C; C07D413/08; C08F002/50;
G03F007/029
US 2005164120 IPCI G03C0001-492 [ICM,7]; G03C0001-005 [ICM,7,C*]
NCL 430/281.100
OS MARPAT 139:324209
AB The photopolymerizable compn. comprises a ***metal*** ***complex*** of a ***squarylium*** compd., a radical generating agent and a compd. contg. .gtoreq.1 ethylenically unsatd. double bond. The photopolymerizable compn. exhibits enhanced light sensitivity, and is useful for presensitized plate, recording material for visible ***laser*** (such as dry film resist, digital proof and hologram), panchromatic sensitizing material (for example, a sensitizing material for a hologram and a sensitizing material for full color display comprising a photopolymerizable compn. included in a microcapsule), coating material, adhesive, etc.
ST photopolymerizable compn ***squarylium*** compd ***metal*** ***complex***
IT Adhesives
Coating materials
Photoresists
(photopolymerizable compns. contg. ***metal*** ***complexes*** of ***squarylium*** compds. for presensitized plates, visible ***laser*** recording materials, coatings and adhesives)
IT Polymerization catalysts
(photopolymn.; photopolymerizable compns. contg. ***metal*** ***complexes*** of ***squarylium*** compds. for presensitized plates, visible ***laser*** recording materials, coatings and adhesives)
IT Lithographic plates
(presensitized; photopolymerizable compns. contg. ***metal*** ***complexes*** of ***squarylium*** compds. for presensitized plates, visible ***laser*** recording materials, coatings and adhesives)
IT 6542-67-2, 2,4,6-Tris(trichloromethyl)-s-triazine
RL: CAT (Catalyst use); USES (Uses)
(photopolymerizable compns. contg. ***metal*** ***complexes*** of ***squarylium*** compds. for presensitized plates, visible ***laser*** recording materials, coatings and adhesives)
IT 439591-71-6P 439591-74-9P 439591-76-1P 439591-99-8P 612830-89-4P
612830-90-7P 612830-91-8P 612830-92-9P 612830-93-0P
RL: IMF (Industrial manufacture); PREP (Preparation)
(photopolymerizable compns. contg. ***metal*** ***complexes*** of ***squarylium*** compds. for presensitized plates, visible ***laser*** recording materials, coatings and adhesives)
IT 612830-94-1P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photopolymerizable compns. contg. ***metal*** ***complexes*** of ***squarylium*** compds. for presensitized plates, visible ***laser*** recording materials, coatings and adhesives)
IT 577974-81-3P 612837-77-1P 612837-78-2P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(photopolymerizable compns. contg. ***metal*** ***complexes*** of ***squarylium*** compds. for presensitized plates, visible ***laser*** recording materials, coatings and adhesives)
IT 89-25-8, 1-Phenyl-3-methylpyrazolin-5-one 91-66-7, N,N-Diethylaniline

118-12-7, 1,3,3-Trimethyl-2-methylene indoline 557-34-6, Zinc acetate 2892-63-9, 3,4-Dichloro-3-cyclobuten-1,2-dione 3119-93-5 5222-73-1, 3,4-Dimethoxy-3-cyclobutene-1,2-dione 6872-17-9, 5-Chloro-1,3,3-trimethyl-2-methylene indoline 7727-43-7, Barium sulfate 15306-17-9, Aluminumtris(ethylacetoacetate) 23253-51-2, 5-Hydroxy-3-phenylisoxazole 29211-43-6 31272-05-6 35976-46-6, 5-Methoxy-1,3,3-trimethyl-2-methyleneindoline 612830-88-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(photopolymerizable compns. contg. ***metal*** ***complexes*** of ***squarylium*** compds. for presensitized plates, visible ***laser*** recording materials, coatings and adhesives)
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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(2) Kyowa Hakko Kogyo Co Ltd; US 5681685 A 1996 CAPLUS
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L6 ANSWER 23 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:563681 CAPLUS <<LOGINID::20060727>>
DN 140:249531
ED Entered STN: 24 Jul 2003
TI Symmetric and asymmetric ***squarylium*** dyes as noncovalent protein labels: a study by fluorimetry and capillary electrophoresis

AU Welder, Frank; Paul, Beverly; Nakazumi, Hiroyuki; Yagi, Shigeyuki; Colyer, Christa L.
CS Department of Chemistry, Wake Forest University, Winston-Salem, NC, 27109, USA

SO Journal of Chromatography, B: Analytical Technologies in the Biomedical and Life Sciences (2003), 793(1), 93-105
CODEN: JCBAAI; ISSN: 1570-0232
PB Elsevier Science B.V.
DT Journal
LA English

CC 9-7 (Biochemical Methods)

AB Noncovalent interactions between two ***squarylium*** dyes and various model proteins have been explored. NN127 and SQ-3 are sym. and asym. ***squarylium*** dyes, resp., the fluorescence emissions of which have been shown to be enhanced upon ***complexation*** with proteins such as bovine serum albumin (BSA), human serum albumin (HSA), .beta.-lactoglobulin A, and trypsinogen. Although these dyes are poorly sol. in aq. soln., they can be dissolved first in methanol followed by diln. with aq. buffer without pptn., and are then suitable for use as fluorescent labels in protein detn. studies. The nature of interactions between these dyes and proteins was studied using a variety of buffer systems, and it was found that electrostatic interactions are involved but not dominant. Dye/protein stoichiometries in the noncovalent ***complexes*** were found to be 1:1 for SQ-3, although various possible stoichiometries were found for NN127 depending upon pH and protein. Assocn. consts. on the order of 105 and 107 were found for noncovalent ***complexes*** of SQ-3 and NN127, resp., with HSA, indicating stronger interactions of the sym. dye with proteins. Finally, HSA ***complexes*** with NN127 were detd. by capillary electrophoresis with ***laser*** -induced fluorescence detection (CE-LIF). In particular, NN127 shows promise as a reagent capable of fluorescently labeling analyte proteins for anal. by CE-LIF without itself being significantly fluorescent under the aq. soln. conditions studied herein.

ST ***squarylium*** dye protein label fluorimetry capillary electrophoresis
IT Molecular association
(between fluorescent dyes and proteins; sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)

IT Albumins, analysis
RL: ANT (Analyte); ANST (Analytical study)
(serum; sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)
IT Dyes
(***squarylium*** ; sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)
IT Onium compounds
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(***squarylium*** ; sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)
IT Capillary electrophoresis
Laser fluorometry
(sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)
IT Lactoglobulins
RL: ANT (Analyte); ANST (Analytical study)
(.beta.-, A; sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)
IT 9002-08-8, Trypsinogen
RL: ANT (Analyte); ANST (Analytical study)
(sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)
IT 138496-68-1, NN127
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)
IT 670248-56-3P, SQ 3
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)
IT 2892-63-9, 3,4-Dichlorocyclobut-3-ene-1,2-dione 27086-49-3, N-Butyl-2-methylbenzothiazolium iodide 38113-78-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)
IT 669707-98-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L6 ANSWER 24 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:452090 CAPLUS <<LOGINID::20060727>>
DN 139:44275
ED Entered STN: 13 Jun 2003
TI Acrylic polymer-based filter for display
IN Ozawa, Tetsuo; Saito, Yasuyo
PA Mitsubishi Chemical Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 24 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G02B005-22
ICS C09B047-12; C09B057-00; C09B057-10
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 73
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003167119	A2	20030613	JP 2001-352850	20011119
PRAI JP 2000-384633	A	20001219		
JP 2001-287370	A	20010920		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003167119	ICM	G02B005-22
	ICS	C09B047-12; C09B057-00; C09B057-10
	IPCI	G02B0005-22 [ICM,7]; C09B0047-12 [ICS,7]; C09B0047-04 [ICS,7,C*]; C09B0057-00 [ICS,7]; C09B0057-10 [ICS,7]
	IPCR	C09B0047-04 [I,C*]; C09B0047-12 [I,A]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10 [I,A]; G02B0005-22 [I,A]; G02B0005-22 [I,C*]

OS MARPAT 139:44275
AB The filter has a layer contg. a colorant (e.g., ***squarylium*** compd., ***metal*** ***complex*** , tetraazaporphyrin compd., etc.) and an acrylic polymer showing glass transition temp. .gtoreq.110.degree.. The filter shows good durability and color adjustment without decrease of light intensity of a display.
ST acrylic polymer colorant display filter
IT Dyes
Optical filters
Optical imaging devices
Plasma display panels
(acrylic polymer-based filter for display)
IT Acrylic polymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(acrylic polymer-based filter for display)
IT 540744-25-0, Optorez OZ 5000 540744-30-7, Optorez OZ 1100
RL: TEM (Technical or engineered material use); USES (Uses)
(acrylic polymer-based filter for display)
IT 202411-23-2 295328-24-4 375823-53-3 382643-57-4
RL: TEM (Technical or engineered material use); USES (Uses)
(colorant; acrylic polymer-based filter for display)

L6 ANSWER 25 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:423557 CAPLUS <<LOGINID::20060727>>
DN 139:338461

ED Entered STN: 03 Jun 2003
TI Donor-acceptor type low band gap polymers: polysquaraines and related systems
AU Ajayaghosh, Ayyappanpillai
CS Photosciences and Photonics Division, Regional Research Laboratory (CSIR), Trivandrum, 695 019, India
SO Chemical Society Reviews (2003), 32(4), 181-191
CODEN: CSRVBR; ISSN: 0306-0012
PB Royal Society of Chemistry
DT Journal; General Review
LA English
CC 37-0 (Plastics Manufacture and Processing)
Section cross-reference(s): 76
AB A review on recent developments in the area of donor-acceptor type low band gap polymers with special emphasis on polysquaraines. In recent years, considerable effort was directed towards the synthesis of conjugated polymers with low ***optical*** band gaps (Eg), since they show intrinsic elec. cond. One of the approaches towards the designing of such polymers is the use of strong donor and acceptor monomers at regular arrangements in the repeating units, which has limited success in many cases. An alternate strategy is the use of org. dyes, having inherently low HUMO-LUMO sepn., as building blocks. Extension of conjugation in org. dyes is therefore expected to result in oligomers and polymers with near IR absorption, which is a signature of low band gaps. ***Squaraine*** dyes are ideal candidates for this purpose due to their unique ***optical*** properties.
ST review polysquaraine donor acceptor low band gap polymer synthesis
IT Polymers, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(conjugated; synthesis of donor-acceptor type low band gap polymers including polysquaraines)
IT Band gap
Electric conductivity
(of donor-acceptor type low band gap polymers including polysquaraines and review thereon)
IT Charge transfer ***complexes***
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of donor-acceptor type low band gap polymers including polysquaraines)
IT 109-97-7DP, Pyrrole, derivs., polymer with ***squaraine*** derivs.
78675-98-6DP, ***Squaraine*** , derivs., polymer with pyrrole derivs.
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of donor-acceptor type low band gap polymers including polysquaraines)
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L6 ANSWER 26 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:14216 CAPLUS <<LOGINID::20060727>>
DN 138:80762
ED Entered STN: 08 Jan 2003
TI ***Laser*** -induced thermal transfer recording materials with good images, and recording method using them
IN Ota, Tomohisa; Konuma, Taro; Maejima, Katsuki; Maehashi, Tatsukazu
PA Konica Co., Japan
SO Jpn. Kokai Tokkyo Koho, 36 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B41M005-40
ICS B41J002-32; B41M005-26; B41M005-30; C09D011-00; C09B023-00; C09B057-00
CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003001953	A2	20030108	JP 2001-192691	20010626

PRAI JP 2001-192691 20010626

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003001953	ICM	B41M005-40
	ICS	B41J002-32; B41M005-26; B41M005-30; C09D011-00; C09B023-00; C09B057-00
	IPCI	B41M0005-40 [ICM,7]; B41J0002-32 [ICS,7]; B41M0005-26 [ICS,7]; B41M0005-30 [ICS,7]; C09D0011-00 [ICS,7]; C09B0023-00 [ICS,7]; C09B0057-00 [ICS,7]
	IPCR	B41J0002-32 [I,A]; B41J0002-32 [I,C*]; B41M0005-26 [I,A]; B41M0005-26 [I,C*]; B41M0005-30 [I,A]; B41M0005-30 [I,C*]; B41M0005-40 [I,A]; B41M0005-40 [I,C*]; C09B0023-00 [N,A]; C09B0023-00 [N,C*]; C09B0057-00 [N,A]; C09B0057-00 [N,C*]; C09D0011-00 [I,A]; C09D0011-00 [I,C*]

OS MARPAT 138:80762
AB The recording material, useful for direct digital color proofs, comprises a base sheet, a photothermal conversion layer, a vapor-deposited ***metal*** layer, and an ink layer in this order. The photothermal conversion layers may contain (thio)pyrylium ***squarylium*** dyes, (thio)pyrylium croconium dyes, selenapyrylium ***squarylium*** dyes, selenapyrylium croconium dyes, telluropyrylium ***squarylium*** dyes, and telluropyrylium croconium dyes. Damages on transferred images by decompn. of the photothermal conversion layers and/or middle layers are prevented with this invention.
ST ***laser*** thermal transfer printing color proof; photothermal dye decompn prevention transfer printing; digital printing thermal transfer ***metal*** layer
IT Thermal-transfer printing
(***laser*** thermal transfer recording sheets with suppressed photothermal dye decompn.)
IT Dyes
(***laser*** ; ***laser*** thermal transfer recording sheets with suppressed photothermal dye decompn.)
IT Thermal-transfer printing materials
(sheets; ***laser*** thermal transfer recording sheets with

suppressed photothermal dye decompn.)
IT 16595-48-5 88878-49-3 93072-15-2 123778-78-9 335662-37-8
481055-47-4 481055-48-5 481056-51-3
RL: TEM (Technical or engineered material use); USES (Uses)
(photothermal conversion layer contg.; ***laser*** thermal transfer recording sheets with suppressed photothermal dye decompn.)
IT 7429-90-5, Aluminum, uses 7440-02-0, Nickel, uses 7440-22-4, Silver, uses 7440-47-3, Chromium, uses 7440-50-8, Copper, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(vapor-deposited; ***laser*** thermal transfer recording sheets with suppressed photothermal dye decompn.)

L6 ANSWER 27 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:645584 CAPLUS <<LOGINID::20060727>>
DN 138:179829
ED Entered STN: 27 Aug 2002
TI Potassium Sensing by Using a Newly Synthesized ***Squaraine*** Dye in Sol-Gel Matrix
AU Ertekin, Kadriye; Yeniguel, Berrin; Akkaya, Engin U.
CS Faculty of Science, Department of Chemistry, Ege University, Izmir, 35100, Turk.
SO Journal of Fluorescence (2002), 12(2), 263-268
CODEN: JOFLEN; ISSN: 1053-0509
PB Kluwer Academic/Plenum Publishers
DT Journal
LA English
CC 79-6 (Inorganic Analytical Chemistry)
AB ***Squaraines*** are a group of fluorescent dyes and pigments derived from squaric acid and dialkylanilines known in applications such as photoreceptors, org. solar cells, ***optical*** recording media, and nonlinear optics. Their very promising spectral properties, long wavelength absorption and emission, and high absorptivity and quantum yields were not exploited so far in relation to ***optical*** sensor design. They exhibit excellent soly. in sol-gel matrixes, and the ***ligand*** is an integral part of the fluorophore .pi. system, which makes the mol. a fluoroionophore. K-sensing agent, bis[4-N-(1-aza-4,7,10,13,16-pentaoxacyclooctadecyl)-3,5-dihydroxyphenyl] ***squaraine*** was used for K sensing in a sol-gel matrix. The spectrofluorometric response of dye-doped tetra-Et orthosilicate (TEOS) film after exposure to certain concns. of K+ was studied, and 62% of relative signal change was achieved. The dynamic working range of the sensor membrane was found between 10-9 and 10-6 M K+, in other terms from nanomolar to micromolar levels, which is an advantage over flame emission spectroscopy, in view of detection limit. The sensor is fully reversible within the dynamic range and the response time (.tau.90) is 2 min under batch conditions. The cross-sensitivity of the mol. to Na+, Ba2+, Ca2+, and NH+4 was also tested in sep. solns.
ST potassium sensing ***squaraine*** dye sol gel matrix
IT Fluorometry
Optical sensors
(potassium sensing by using a newly synthesized ***squaraine*** dye in Sol-gel matrix)
IT 7440-09-7, Potassium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(potassium sensing by using a newly synthesized ***squaraine*** dye in Sol-gel matrix)
IT 198434-19-4, Bis[4-N-(1-aza-4,7,10,13,16-pentaoxacyclooctadecyl)-3,5-dihydroxyphenyl] ***squaraine***
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(potassium sensing by using a newly synthesized ***squaraine*** dye in Sol-gel matrix)
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L6 ANSWER 28 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:487670 CAPLUS <<LOGINID::20060727>>
DN 137:70548
ED Entered STN: 28 Jun 2002
TI ***Metal*** ***complex*** -type ***squarylium*** compounds and rewritable ***optical*** recording media made by using the same
IN Shimizu, Ikuo; Toyoda, Hiroshi; Kinugasa, Motoharu; Yamada, Shiho; Noguchi, Soh; Satoh, Tsutomu; Tomura, Tatsuya
PA Kyowa Hakko Kogyo Co., Ltd., Japan; Kyowa Yuka Co., Ltd.; Ricoh Company, Ltd.
SO PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM C09B023-00
ICS B41M005-26; G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41, 73
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002050190	A1	20020627	WO 2001-JP11116	20011219
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2400181	AA	20020627	CA 2001-2400181	20011219
	AU 2002017451	A5	20020701	AU 2002-17451	20011219
	EP 1334998	A1	20030813	EP 2001-271415	20011219
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	TW 588090	B	20040521	TW 2001-90131711	20011220
	US 2003187272	A1	20031002	US 2002-203409	20021127
	US 6660867	B2	20031209		
PRAI	JP 2000-387192	A	20001220		
	WO 2001-JP11116	W	20011219		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002050190	ICM	C09B023-00
	ICS	B41M005-26; G11B007-24
	IPCI	C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10 [I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
	ECLA	C09B057/00S; C09B057/10; G11B007/249
CA 2400181	IPCI	C09B0023-00 [ICM,7]; G11B0007-24 [ICS,7]; B41M0005-26 [ICS,7]
	ECLA	C09B057/00S; C09B057/10; G11B007/249
AU 2002017451	IPCI	C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10 [I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
EP 1334998	IPCI	C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10 [I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
	ECLA	C09B057/00S; C09B057/10; G11B007/249

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 TW 588090       IPCI   C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24
                        [ICS,7]
 US 2003187272   IPCI   G11B0007-24 [ICM,7]; C07F0005-06 [ICS,7]; C07F0005-00
                        [ICS,7,C*]
                 IPCR   C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10
                        [I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*];
                        G11B0007-24 [I,C*]; G11B0007-249 [I,A]
                 NCL    548/101.000
                 ECLA   C09B057/00S; C09B057/10; G11B007/249
OS   MARPAT 137:70548
GI


/ Structure 22 in file .gra /


AB   The invention provides materials having spectral characteristics, light
     resistance, soly. and thermal decompn. characteristics suitable for DVD-R
     recording, more specifically,   ***squarylium***  -  ***metal***
       ***complexes***   represented by I (R1,2 = alkyl, aralkyl, aryl, or
     heterocyclic group; Q =   ***metal***   atom having ability to coordinate
     such as   ***Al***  ; q = 2 or A = aryl, heterocyclic group, or Y=CH-; Y =
     aryl or heterocyclic group). The max.   ***optical***   absorption of the
       ***metal***     ***complex***     ***squarylium***   compd. dissolved in
     chloroform is 550-600 nm, and the mol extinction coeff. at the max
     absorption wavelength, log .epsilon., is .gtoreq.5.  The
       ***information***   reproducing wavelength is 600-700 nm.  The rewritable
       ***optical***   recording medium contains a   ***metal***
       ***complex***  - or amine-based photostabilizer.
ST     ***metal***   aluminum   ***squarylium***   compd rewritable
       ***optical***   recording medium; amine photostabilizer rewritable
       ***optical***   recording medium
IT     ***Optical***   recording materials
        (erasable;   ***metal***     ***squarylium***     ***complex***   for
        rewritable   ***optical***   recording medium)
IT   Onium compounds
     RL: TEM (Technical or engineered material use); USES (Uses)
        (  ***squarylium***  ; rewritable   ***optical***   recording medium
        contg.)
IT   86-92-0   89-25-8   90-31-3   118-12-7, 1,3,3-Trimethyl-2-
     methyleneindoline   321-07-3   2749-59-9   4845-49-2   5222-73-1
     6872-17-9, 5-Chloro-1,3,3-trimethyl-2-methyleneindoline   13024-90-3
     20124-80-5   29211-43-6   31272-04-5   31272-05-6   35976-46-6,
     5-Methoxy-1,3,3-trimethyl-2-methyleneindoline   39578-87-5,
     1,3,3,5-Tetramethyl-2-methyleneindoline   54683-96-4   60798-11-0
     62783-93-1, 5-Bromo-1,3,3-trimethyl-2-methyleneindoline   64123-72-4
     99567-90-5   118048-80-9   118048-83-2   118049-03-9   184707-90-2
     439289-89-1   439289-90-4   439289-91-5
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (  ***metal***     ***squarylium***     ***complex***   for rewritable
          ***optical***   recording medium)
IT   439591-71-6P   439591-72-7P   439591-73-8P   439591-74-9P   439591-75-0P
     439591-76-1P   439591-77-2P   439591-78-3P   439591-79-4P   439591-80-7P
     439591-81-8P   439591-82-9P   439591-83-0P   439591-84-1P   439591-85-2P
     439591-86-3P   439591-87-4P   439591-88-5P   439591-89-6P   439591-90-9P
     439591-91-0P   439591-92-1P   439591-93-2P   439591-94-3P   439591-95-4P
     439591-96-5P   439591-97-6P   439591-98-7P   439591-99-8P   439592-00-4P
     439592-01-5P   439592-02-6P   439592-03-7P   439592-04-8P   439592-05-9P
     439592-06-0P
     RL: SPN (Synthetic preparation); TEM (Technical or engineered material
     use); PREP (Preparation); USES (Uses)
        (  ***metal***     ***squarylium***     ***complex***   for rewritable
          ***optical***   recording medium)
IT   23507-22-4   87314-12-3   227190-73-0   439610-73-8
     RL: TEM (Technical or engineered material use); USES (Uses)
        (photostabilizer; rewritable   ***optical***   recording medium contg.)
RE.CNT  4     THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Konica Corp; JP 2000345059 A 2000 CAPLUS
(2) Kyowa Hakko Kogyo Co Ltd; WO 0144233 A1 2001 CAPLUS
(3) Kyowa Hakko Kogyo Co Ltd; EP 1152001 A1 2001 CAPLUS
(4) Ricoh Co Ltd; JP 200123235 A 2001
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L6 ANSWER 29 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:292137 CAPLUS <<LOGINID::20060727>>
DN 136:332836
ED Entered STN: 19 Apr 2002
TI Optic recording medium for rewritable DVD new format
IN Tomura, Tatsuya; Noguchi, Takashi; Sasa, Noboru; Sato, Tsutomu; Ueno, Yasunobu; Azuma, Yasuhiro
PA Ricoh Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G11B007-24
ICS G11B007-24; B41M005-26
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002117589	A2	20020419	JP 2000-306809	20001005
	US 2002048646	A1	20020425	US 2001-925425	20010809
	US 6741547	B2	20040525		
PRAI	JP 2000-243157	A	20000810		
	JP 2000-270833	A	20000906		
	JP 2000-306808	A	20001005		
	JP 2000-306809	A	20001005		
	JP 2000-306810	A	20001005		
	JP 2001-17483	A	20010125		
	JP 2001-28845	A	20010205		
	JP 2001-84738	A	20010323		
	JP 2001-97847	A	20010330		
	JP 2001-99870	A	20010330		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2002117589	ICM	G11B007-24
	ICS	G11B007-24; B41M005-26
	IPCI	G11B0007-24 [ICM,7]; G11B0007-24 [ICS,7]; B41M0005-26 [ICS,7]
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
US 2002048646	IPCI	B32B0003-02 [ICM,7]
	IPCR	B32B0003-02 [I,A]; B32B0003-02 [I,C*]; G11B0007-00 [I,C*]; G11B0007-0045 [I,A]; G11B0007-007 [I,A]; G11B0007-007 [I,C*]; G11B0007-125 [I,A]; G11B0007-125 [I,C*]; G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-247 [I,A]; G11B0007-26 [I,A]; G11B0007-26 [I,C*]; G11B0027-19 [I,A]; G11B0027-19 [I,C*]; G11B0027-24 [I,A]; G11B0027-30 [N,A]; G11B0027-30 [N,C*]
	NCL	428/064.400
	ECLA	B32B003/02; G11B007/0045R; G11B007/007; G11B007/125C; G11B007/24B3F; G11B007/244; G11B007/247; G11B007/26P; G11B027/19; G11B027/24

AB The ***optical*** recording medium comprises a recording layer and a reflecting layer on a substrate, wherein (1) the substrate has a wobble 4T-96T, (2) the recording layer has a refractive index 1.5.ltoreq.n.ltoreq.3.0 for .+-.5 nm wavelength range and has an org. dye film with an extinction coeff. 0.02.ltoreq.k.ltoreq.0.2, and (3) the wobble frequency (m) and a groove depth of the substrate(dl) have a relation 4,000.ltoreq.(dl .times. m).ltoreq.240,000. The recording layer contains a ***metal*** ***chelate*** dye, a polymethine dye, a ***squarylium*** dye, and/or an azaazulene dye. Or, the recording layer contains an azo ***metal*** ***chelate*** dye, a formazan ***metal*** ***chelate*** dye, and/or a dipyrromethene ***metal*** ***chelate*** dye.
ST optic recording medium rewritable DVD
IT ***Optical*** disks
(Optic recording medium for rewritable DVD new format)
IT 7440-02-0D, Nickel, ***complexes*** with azo compds. 7440-50-8D,

Copper, ***complexes*** with azo compds. 412917-96-5D, nickel ***complexes*** 412917-98-7 412917-99-8D, nickel ***complexes*** 412918-01-5 412918-02-6D, copper ***complexes*** 413579-02-9
RL: DEV (Device component use); USES (Uses)
(Optic recording medium for rewritable DVD new format)

L6 ANSWER 30 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:25052 CAPLUS <<LOGINID::20060727>>
DN 136:233494
ED Entered STN: 10 Jan 2002
TI Review of near-infrared ***laser*** protective dyes
AU Yang, Xiao-Bing; Ding, Song-Tao; Yang, Yu-Sheng; Zhou, Xiao-Hai
CS Research Institute of Chemical Defense, Beijing, 100083, Peop. Rep. China
SO Youji Huaxue (2002), 22(1), 33-41
CODEN: YCHHDX; ISSN: 0253-2786
PB Kexue Chubanshe
DT Journal; General Review
LA Chinese
CC 41-0 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
AB A review. Due to the requirement of near-IR ***laser*** protective dyes and ***laser*** stealth materials, this review focused on the research progress of near-IR absorbing dyes, and some suggestions were put forward on the future research. Some of the most important tech. requirements for ***laser*** -protective dyes within the plastic are as follows: sharp absorption bands at specific wavelengths corresponding to ***laser*** emission, excellent lightfastness, robust thermal and chem. stability, stability to ambient conditions, high ***optical*** d. and scotopic luminous transmission, good soly. in plastic and low toxicity. This review paid attention to the properties such as the max. absorption wavelength and the absorption intense, attention had been directed towards eight types near-IR dyes: cyanine dyes which included polymethine dyes and ***squarylium*** or croconium dyes, phthalocyanines and naphthalocyanines, ***metal*** ***complex*** dyes, quinone dyes, azo dyes, radical dyes, multiphenylmethane dyes and perylene dyes. Other kinds of near-IR dyes were also mentioned, such as arom. annulenes, planes contg. so-called nonbenzenoid arom. rings, cyclic cross-conjugated hydrocarbons having inserted p-quinoid ring, fluorenylium dyes with inorg. anions, donor-acceptor cyclophanes, tetrapyrazinoporphyrazines and pentaazadentate expanded porphyrins et ***al*** . All of the dyes mentioned above had some good properties for use as the near-IR ***laser*** protective dyes and ***laser*** stealth materials, but there also existed defects in every kind of dyes.
ST review near IR ***laser*** protective dye
IT Dyes
(***laser*** ; near-IR ***laser*** protective dyes)
IT IR ***lasers***
(near-IR; near-IR ***laser*** protective dyes)

L6 ANSWER 31 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:881855 CAPLUS <<LOGINID::20060727>>
DN 136:29193
ED Entered STN: 07 Dec 2001
TI Photoimaging materials containing photosensitive microcapsules with excellent image reproducibility
IN Ito, Akira; Ibaraki, Kazuhiko
PA Mitsubishi Paper Mills, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS G03F007-004; G03F007-028; G03F007-029; C09B011-28; C09B023-00
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001337449	A2	20011207	JP 2000-307458	20001006
PRAI JP 2000-83795	A	20000324		

CLASS
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

JP 2001337449	ICM	G03F007-004
	ICS	G03F007-004; G03F007-028; G03F007-029; C09B011-28; C09B023-00
	IPCI	G03F0007-004 [ICM,7]; G03F0007-004 [ICS,7]; G03F0007-028 [ICS,7]; G03F0007-029 [ICS,7]; C09B0011-28 [ICS,7]; C09B0011-00 [ICS,7,C*]; C09B0023-00 [ICS,7]
	IPCR	C09B0011-00 [N,C*]; C09B0011-28 [N,A]; C09B0023-00 [N,A]; C09B0023-00 [N,C*]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03F0007-028 [I,A]; G03F0007-028 [I,C*]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]

AB The material contains microcapsules contg. (A) a coloring material having a max. spectral absorption in a visible light region, (B) a polymerizable monomer, (C) a photopolymn. initiator, and (D) a spectral sensitizing dyes being photobleachable by the interaction with C, on a support, wherein max. absorption difference between A and D is .gtoreq.50 nm. The material may contain decoloration accelerators, preferably arom. carbonyl compds. or onium salts. The initiators may be Fe-arene ***complexes*** and the dyes may be selected from ***squarylium*** dyes, cyanine dyes, and triarylmethane dyes.

ST photosensitive microcapsule ***optical*** recording image reproducibility; photobleaching ***squarylium*** sensitizer dye spectral absorption; onium decoloration accelerator transfer printing sheet

IT Carbonyl compounds (organic), uses
RL: TEM (Technical or engineered material use); USES (Uses)
(arom., decoloration accelerator; transfer printing sheets having photosensitive microcapsule layers contg. photobleachable spectral sensitizing dyes with good image reproducibility)

IT Onium compounds
RL: TEM (Technical or engineered material use); USES (Uses)
(decoloration accelerator; transfer printing sheets having photosensitive microcapsule layers contg. photobleachable spectral sensitizing dyes with good image reproducibility)

IT Photoimaging materials
(photopolymerizable; transfer printing sheets having photosensitive microcapsule layers contg. photobleachable spectral sensitizing dyes with good image reproducibility)

IT Dyes
(photosensitizing; transfer printing sheets having photosensitive microcapsule layers contg. photobleachable spectral sensitizing dyes with good image reproducibility)

IT Cyanine dyes
(sensitizer; transfer printing sheets having photosensitive microcapsule layers contg. photobleachable spectral sensitizing dyes with good image reproducibility)

IT Onium compounds
RL: TEM (Technical or engineered material use); USES (Uses)
(***squarylium*** , sensitizer; transfer printing sheets having photosensitive microcapsule layers contg. photobleachable spectral sensitizing dyes with good image reproducibility)

IT Decolorizing agents
Microcapsules
Transfer printing
(transfer printing sheets having photosensitive microcapsule layers contg. photobleachable spectral sensitizing dyes with good image reproducibility)

IT 6359-17-7 123778-77-8
RL: TEM (Technical or engineered material use); USES (Uses)
(sensitizing dye; transfer printing sheets having photosensitive microcapsule layers contg. photobleachable spectral sensitizing dyes with good image reproducibility)

IT 32760-80-8, Irgacure 261
RL: CAT (Catalyst use); USES (Uses)
(transfer printing sheets having photosensitive microcapsule layers contg. photobleachable spectral sensitizing dyes with good image reproducibility)

IT 147-14-8, C.I. Pigment Blue 15:3 4986-89-4, Pentaerythritol tetraacrylate 29570-58-9, Dipentaerythritol hexaacrylate 99402-80-9, C.I. Pigment Red 184
RL: TEM (Technical or engineered material use); USES (Uses)
(transfer printing sheets having photosensitive microcapsule layers

contg. photobleachable spectral sensitizing dyes with good image reproducibility)

L6 ANSWER 32 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:676354 CAPLUS <<LOGINID::20060727>>
DN 135:233963
ED Entered STN: 14 Sep 2001
TI ***Optical*** recording medium and ***optical*** recording and reading method using the same
IN Noguchi, Soh; Satoh, Tsutomu; Tomura, Tatsuya; Sasa, Noboru; Ueno, Yasunobu; Higashi, Yasuhiro; Shimizu, Ikuo Yokkaichi Research Laboratories; Toyoda, Hiroshi Yokkaichi Research Laboratories; Kinugasa, Motoharu Yokkaichi Research Labs.; Yamada, Shiho; Ikuta, Masanori Yokkaichi Research Laboratories; Mutoh, Kenji
PA Ricoh Company, Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Yuka Co., Ltd.
SO Eur. Pat. Appl., 40 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1132902	A1	20010912	EP 2001-105270	20010305
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001322356	A2	20011120	JP 2001-36663	20010214
JP 2002234259	A2	20020820	JP 2001-36632	20010214
US 2001044001	A1	20011122	US 2001-798565	20010302
US 6558768	B2	20030506		
PRAI JP 2000-62437	A	20000307		
JP 2001-36632	A	20010214		
JP 2001-36663	A	20010214		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1132902	ICM	G11B007-24
	IPCI	G11B0007-24 [ICM,6]
	IPCR	G11B0007-24 [N,A]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
	ECLA	G11B007/249
JP 2001322356	IPCI	B41M0005-26 [ICM,7]; C09B0023-00 [ICS,7]; C09B0045-00 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0045-00 [I,A]; C09B0045-00 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
JP 2002234259	IPCI	B41M0005-26 [ICM,7]; B32B0009-00 [ICS,7]; B32B0015-08 [ICS,7]; B32B0015-20 [ICS,7]; C07D0455-04 [ICS,7]; C07D0455-00 [ICS,7,C*]; C07D0487-04 [ICS,7]; C07D0487-00 [ICS,7,C*]; C09B0023-00 [ICS,7]; C09B0045-00 [ICS,7]; C09B0045-14 [ICS,7]; C09B0045-18 [ICS,7]; C09B0045-20 [ICS,7]; C09B0045-22 [ICS,7]; C09B0057-00 [ICS,7]; G11B0007-0045 [ICS,7]; G11B0007-00 [ICS,7,C*]; G11B0007-24 [ICS,7]; C07D0209-14 [ICS,7]; C07D0209-88 [ICS,7]; C07D0209-00 [ICS,7,C*]; C07D0401-12 [ICS,7]; C07D0401-00 [ICS,7,C*]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*]; C07D0417-12 [ICS,7]; C07D0417-00 [ICS,7,C*]
	IPCR	B32B0009-00 [I,A]; B32B0009-00 [I,C*]; B32B0015-08 [I,A]; B32B0015-08 [I,C*]; B32B0015-20 [I,A]; B32B0015-20 [I,C*]; B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C07D0209-00 [N,C*]; C07D0209-14 [N,A]; C07D0209-88 [N,A]; C07D0401-00 [N,C*]; C07D0401-12 [N,A]; C07D0403-00 [N,C*]; C07D0403-08 [N,A]; C07D0417-00 [N,C*]; C07D0417-12 [N,A]; C07D0455-00 [I,C*]; C07D0455-04 [I,A]; C07D0487-00 [I,C*]; C07D0487-04 [I,A]; C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0045-00 [I,A]; C09B0045-00 [I,C*];

C09B0045-14 [I,A]; C09B0045-18 [I,A]; C09B0045-20 [I,A]; C09B0045-22 [I,A]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-00 [I,C*]; G11B0007-0045 [I,A]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]

US 2001044001 IPCI B32B0003-02 [ICM,7]
IPCR G11B0007-24 [N,A]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
NCL 428/064.400
ECLA G11B007/249

OS MARPAT 135:233963
GI

/ Structure 23 in file .gra /

AB The invention relates to an ***optical*** recording medium with a large capacity for storing data, capable of recording and reading ***information*** using short wavelength light and an ***optical*** recording and reading method using this ***optical*** recording medium. The ***optical*** recording medium has a substrate and a recording layer formed thereon, the recording layer contg. .gtoreq.1 ***squarylium*** compd. and 1 azo ***metal*** ***chelate*** compd. including an azo moiety (I) or (II) where A, B are a residue for forming an arom. ring, A' is a residue for forming a heterocyclic ring, and X represents a substituent having an active hydrogen group. Writing and reading steps are performed by the application of a semiconductor ***laser*** beam with a wavelength at 600-720 nm.

ST ***optical*** recording reading ***squarylium*** dye azo ***metal*** ***chelate***

IT ***Optical*** disks
(***optical*** recording medium having recording layer contg. ***squarylium*** dye and azo ***metal*** ***chelate***)

IT ***Chelates***
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(***optical*** recording medium having recording layer contg. ***squarylium*** dye and azo ***metal*** ***chelate***)

IT Dyes
(***squarylium*** ; ***optical*** recording medium having recording layer contg. ***squarylium*** dye and azo ***metal*** ***chelate***)

IT 359773-25-4P 359773-26-5P 359773-27-6P 359773-28-7P 359773-29-8P
359773-30-1P 359773-31-2P 359773-32-3P 359773-33-4P 359773-34-5P
359773-35-6P 359773-36-7P 359773-37-8P 359773-38-9P 359773-39-0P
359773-40-3P 359773-41-4P 359773-42-5P
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(***optical*** recording medium having recording layer contg. azo ***metal*** ***chelate***)

IT 344933-91-1P 344933-99-9P 344934-03-8P 345232-93-1P 345232-96-4P
345232-98-6P 345233-03-6P 345233-05-8P 359773-79-8P 359773-80-1P
359773-81-2P 359773-82-3P 359773-83-4P 359773-84-5P 359773-85-6P
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(***optical*** recording medium having recording layer contg. ***squarylium*** dye)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Mitsubishi Chem Corp; EP 0844243 A 1998 CAPLUS
(2) Mitsui Chemicals Inc; EP 0881636 A 1998 CAPLUS
(3) Ricoh Kk; EP 0981132 A 2000 CAPLUS
(4) Sasa, N; US 5939163 A 1999
(5) Tdk Corp; EP 0887202 A 1998 CAPLUS

L6 ANSWER 33 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:790686 CAPLUS <<LOGINID::20060727>>
DN 133:331759
ED Entered STN: 10 Nov 2000
TI Method for detecting biological agents
IN Chen, Liaohai; Mcbranch, Duncan W.; Wang, Hsing-Lin; Whitten, David G.
PA The Regents of the University of California, USA

SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-68
ICS C12Q001-70; G01N021-64; G01N033-00; G01N033-53; G01N033-531; G01N033-533; G01N033-543; C07H021-02; C07H021-04; C12N015-00; B05D001-18; B01J013-00
CC 9-1 (Biochemical Methods)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000066790	A1	20001109	WO 2000-US12423	20000504
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZW				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2340905	AA	20001109	CA 2000-2340905	20000504
	EP 1097242	A1	20010509	EP 2000-928892	20000504
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 6589731	B1	20030708	US 2000-565589	20000504
	AU 782254	B2	20050714	AU 2000-47058	20000504
	IL 141383	A1	20051120	IL 2000-141383	20000504
PRAI	US 1999-132556P	P	19990505		
	WO 2000-US12423	W	20000504		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2000066790	ICM	C12Q001-68
	ICS	C12Q001-70; G01N021-64; G01N033-00; G01N033-53; G01N033-531; G01N033-533; G01N033-543; C07H021-02; C07H021-04; C12N015-00; B05D001-18; B01J013-00
	IPCI	C12Q0001-68 [ICM,7]; C12Q0001-70 [ICS,7]; G01N0021-64 [ICS,7]; G01N0033-00 [ICS,7]; G01N0033-53 [ICS,7]; G01N0033-531 [ICS,7]; G01N0033-533 [ICS,7]; G01N0033-543 [ICS,7]; C07H0021-02 [ICS,7]; C07H0021-04 [ICS,7]; C07H0021-00 [ICS,7,C*]; C12N0015-00 [ICS,7]; B05D0001-18 [ICS,7]; B01J0013-00 [ICS,7]
	IPCR	G01N0033-543 [I,A]; G01N0033-543 [I,C*]
	ECLA	G01N033/542; G01N033/543K2; G01N033/543K4
CA 2340905	IPCI	C12Q0001-68 [ICM,7]; B01J0013-00 [ICS,7]; C12N0015-00 [ICS,7]; G01N0033-00 [ICS,7]; C07H0021-02 [ICS,7]; C07H0021-04 [ICS,7]; C07H0021-00 [ICS,7,C*]; B05D0001-18 [ICS,7]; G01N0033-53 [ICS,7]; G01N0033-531 [ICS,7]; G01N0033-533 [ICS,7]; G01N0033-543 [ICS,7]; G01N0021-64 [ICS,7]; C12Q0001-70 [ICS,7]
	IPCR	G01N0033-543 [I,A]; G01N0033-543 [I,C*]
	ECLA	G01N033/542; G01N033/543K2; G01N033/543K4
EP 1097242	IPCI	C12Q0001-68 [ICM,6]; C12Q0001-70 [ICS,6]; G01N0021-64 [ICS,6]; G01N0033-00 [ICS,6]; G01N0033-53 [ICS,6]; G01N0033-531 [ICS,6]; G01N0033-533 [ICS,6]; G01N0033-543 [ICS,6]; C07H0021-02 [ICS,6]; C07H0021-04 [ICS,6]; C07H0021-00 [ICS,6,C*]; C12N0015-00 [ICS,6]; B05D0001-18 [ICS,6]; B01J0013-00 [ICS,6]
	IPCR	G01N0033-543 [I,A]; G01N0033-543 [I,C*]
US 6589731	IPCI	G01N0033-53 [ICM,7]; G01N0033-543 [ICS,7]
	IPCR	G01N0033-543 [I,A]; G01N0033-543 [I,C*]
	NCL	435/005.000; 422/068.100; 422/082.010; 422/082.020; 422/082.050; 422/082.080; 435/004.000; 435/006.000; 435/007.100; 435/007.900; 435/174.000; 435/176.000; 435/177.000; 435/180.000; 435/181.000; 435/287.100; 435/287.200; 435/808.000; 435/966.000; 436/172.000; 436/501.000; 436/504.000; 436/518.000; 436/524.000; 436/528.000; 436/529.000; 436/805.000; 436/806.000; 436/808.000; 436/823.000
AU 782254	IPCI	C12Q0001-68 [ICM,7]; B01J0013-00 [ICS,7]; B05D0001-18 [ICS,7]; C07H0021-02 [ICS,7]; C07H0021-04 [ICS,7];

C07H0021-00 [ICS,7,C*]; C12N0015-00 [ICS,7];
C12Q0001-70 [ICS,7]; G01N0021-64 [ICS,7]; G01N0033-00
[ICS,7]; G01N0033-53 [ICS,7]; G01N0033-531 [ICS,7];
G01N0033-533 [ICS,7]; G01N0033-543 [ICS,7]
IPCR G01N0033-543 [I,A]; G01N0033-543 [I,C*]
ECLA G01N033/542; G01N033/543K2; G01N033/543K4
IL 141383 IPCI C12Q0001-68 [ICS,7]; C12Q0001-70 [ICS,7]; G01N0021-64
[ICS,7]; G01N0033-53 [ICS,7]
IPCR G01N0033-543 [I,C*]; G01N0033-543 [I,A]
ECLA G01N033/542; G01N033/543K2; G01N033/543K4

AB A sensor is provided including a polymer capable of having an alterable measurable property from the group of luminescence and elec. cond., the polymer having an intermediate combination of a recognition element, a tethering element and a property-altering element bound thereto and capable of altering the measurable property, the intermediate combination adapted for subsequent sepn. from the polymer upon exposure to an agent having an affinity for binding to the recognition element whereupon the sepn. of the intermediate combination from the polymer results in a detectable change in the alterable measurable property, and, a means of detecting said detectable change in the alterable measurable property.

ST detecting biol agent

IT Atoms
(Divalent; method for detecting biol. agents)

IT Gels
(Micro porous; method for detecting biol. agents)

IT Polyanilines
RL: DEV (Device component use); USES (Uses)
(and derivs.; method for detecting biol. agents)

IT ***Ligands***
RL: DEV (Device component use); USES (Uses)
(chem.; method for detecting biol. agents)

IT Polymers, uses
RL: DEV (Device component use); USES (Uses)
(conjugated; method for detecting biol. agents)

IT Immunoglobulins
RL: DEV (Device component use); USES (Uses)
(fragments; method for detecting biol. agents)

IT Affinity
Bacteria (Eubacteria)
Biosensors
Cell
Dissolution
Electric conductivity
Energy transfer
Fluorescence
Fluorescent dyes
Fluorometry
Luminescence
Luminescence spectroscopy
Microorganism
Optical fibers
Polyelectrolytes
Sensors
Separation
Solutions
Test kits
Virus
(method for detecting biol. agents)

IT Antibodies
Antigens
Coordination compounds
Enzymes, uses
Glycolipids
Nucleic acids
Oligonucleotides
Peptide nucleic acids
Plastics, uses
Poly(arylenealkenylenes)
Polyacetylenes, uses
Polydiacetylenes
Polymers, uses
Polysaccharides, uses

Proteins, general, uses
Toxins
RL: DEV (Device component use); USES (Uses)
(method for detecting biol. agents)
IT Fluorescent substances
(polymers; method for detecting biol. agents)
IT Peptides, uses
RL: DEV (Device component use); USES (Uses)
(polypeptides; method for detecting biol. agents)
IT 229010-56-4, Single bond
RL: ANT (Analyte); ANST (Analytical study)
(method for detecting biol. agents)
IT 58-85-5, Biotin 71-00-1D, Histidine, copper ***complex***
1910-42-5, Methyl viologen 7440-50-8D, Copper, histidine ***complex***
, uses 9033-83-4, Polyphenylene 9055-67-8D, Poly(ADP-ribose)
polymerase, DNA-binding domain 25067-54-3, Polyfuran 25067-54-3D,
Polyfuran, derivs. 25067-58-7, Polyacetylene 25067-59-8, Polyvinyl
carbazole 25067-59-8D, Polyvinyl carbazole, derivs. 25233-30-1,
Polyaniline 25233-30-1D, Polyaniline, derivs. 25233-34-5,
Polythiophene 26009-24-5, Poly(p-phenylene vinylene) 30604-81-0,
Polypyrrole 30604-81-0D, Polypyrrole, derivs. 37758-47-7, Ganglioside
GM1 78675-98-6, ***Squaraine*** 96638-49-2, Poly(phenylene
vinylene) 96638-49-2D, Poly(phenylene vinylene), derivs. 103419-76-7,
Poly(1,4-naphthalenediyl-1,2-ethenediyl) 125714-86-5 164658-06-4,
Poly(2,5-pyridinediyl-1,2-ethenediyl) 189145-97-9, Poly(pyridinediyl-1,2-
ethenediyl)
RL: DEV (Device component use); USES (Uses)
(method for detecting biol. agents)
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Chen, L; Proceedings of the National Academy of Science 1999, V96(22),
P12287 CAPLUS
(2) Cubicciotti; US 5656739 A 1997 CAPLUS
(3) Cubicciotti; US 5739305 A 1998 CAPLUS
(4) Dattagupta; US 4724202 A 1998 CAPLUS
(5) Hawa; WO 9913993 A1 1999 CAPLUS
(6) Molecular Machines Inc; WO 9960169 A1 1999 CAPLUS
(7) Rathbone, D; Tetrahedron Letters 2000, V41, P123 CAPLUS
(8) Research Corporation Technologies Inc; WO 9641173 A1 1996 CAPLUS
(9) Suarez-Rodriguez, J; Analytica Chimica Acta 2000, V405, P67 CAPLUS

L6 ANSWER 34 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:608622 CAPLUS <<LOGINID::20060727>>
DN 133:205084
ED Entered STN: 01 Sep 2000
TI In vivo method of measuring kidney or liver function with fluorescent dye
clearance
IN Dorshow, Richard Bradley; Achilefu, Samuel; Rajagopalan, Raghavan; Bugaj,
Joseph Edward
PA Mallinckrodt Inc., USA
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K049-00
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 13, 14
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000050093	A1	20000831	WO 2000-US1322	20000120
	W: CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6228344	B1	20010508	US 1999-258148	19990226
	CA 2360421	AA	20000831	CA 2000-2360421	20000120
	EP 1154802	A1	20011121	EP 2000-902449	20000120
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002537363	T2	20021105	JP 2000-600703	20000120
PRAI	US 1999-258148	A	19990226		
	US 1997-816332	A2	19970313		

WO 2000-US1322 W 20000120

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2000050093	ICM	A61K049-00
	IPCI	A61K0049-00 [ICM,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
	ECLA	A61K049/00P4F
US 6228344	IPCI	A61K0049-00 [ICM,7]; G01N0031-00 [ICS,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
	NCL	424/009.100; 424/001.110; 424/009.600
	ECLA	A61K049/00P4F
CA 2360421	IPCI	A61K0049-00 [ICM,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
EP 1154802	IPCI	A61K0049-00 [ICM,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
JP 2002537363	IPCI	A61K0049-00 [ICM,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]

AB A method of measuring physiol. function of a group of body cells, includes the step of selecting a detectable agent capable of emitting a measurable electromagnetic emission. The agent is introduced into body fluid which contacts the group of body cells. The emission is measured, and physiol. function is detd. based on measurement of the emission. Fluorescent dyes conjugated to physiol. acceptable polyanionic carries are used.

ST kidney liver function fluorometry dye clearance

IT Medical goods
(catheter; in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT Polynucleotides
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(***complexes*** with dyes; in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT Imaging agents
(contrast; in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT Unsaturated compounds
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(cyanines; in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT Medical goods
(endoscope; in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT Kidney
Liver
(function; in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT Body fluid
Fluorometry
Laser radiation
(in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT Blood analysis
(in vivo; in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT Vein
(jugular; in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT Animal cell
(kidney; in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT Animal cell
(liver; in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT 92-84-2D, Phenothiazine, derivs. 110-15-6D, Succinic acid, reaction with fluorescent dye agents 110-94-1D, Glutaric acid, polymers, reaction with fluorescent dye agents 141-82-2D, Malonic acid, polymers, reaction with fluorescent dye agents 262-05-5D, Phenoselenazine, derivs. 3246-80-8D, 9-Phenylxanthene, derivs. 9003-01-4D, Polyacrylic acid, reaction with fluorescent dye agents 24937-47-1 24937-49-3 24991-23-9 25191-15-5D, L-Phenylalanine homopolymer, sulfonyl derivs. 25821-94-7 26009-03-0D, Polyglycolic acid, reaction with fluorescent dye agents 26063-13-8, Polyaspartic acid 26124-68-5D, Polyglycolic acid, reaction

with fluorescent dye agents 26913-90-6 28677-33-0D, reaction with fluorescent dye agents 28679-89-2D, reaction with fluorescent dye agents 38000-06-5 78675-98-6D, ***Squaraine*** , derivs., reaction with fluorescent dye agents 290307-49-2D, reaction with fluorescent dye agents 290307-51-6D, reaction with fluorescent dye agents 290307-56-1D, reaction with polynucleotides 290307-57-2D, reaction with polynucleotides 290356-35-3D, reaction with fluorescent dye agents 290356-59-1D, reaction with fluorescent dye agents
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT 9003-01-4, Polyacrylic acid 25104-12-5, Polyornithine 25104-18-1, Polylysine 25821-52-7, Polyserine
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT 1497-49-0 3599-32-4D, Indocyanine green, derivs. 4224-70-8, 6-Bromohexanoic acid 25212-18-4, Polyarginine 25513-46-6, Polyglutamic acid 25608-40-6, Polyaspartic acid 26853-89-4, Poly-D-lysine 27072-45-3, Fitc 27072-45-3D, FITC, reaction with polynucleotides 41532-84-7, 1,1,2-Trimethyl-[1H]-benz[e]indole 78675-98-6D, ***Squaraine*** , derivs., reaction with polynucleotides 108157-58-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT 3599-32-4P, Indocyanine green 24937-47-1DP, Polyarginine, reaction with fluorescent dye agents 24991-23-9DP, reaction with fluorescent dye agents 25212-18-4DP, Polyarginine, reaction with fluorescent dye agents 25513-46-6DP, Polyglutamic acid, reaction with fluorescent dye agents 25608-40-6DP, Polyaspartic acid, reaction with fluorescent dye agents 26063-13-8DP, Polyaspartic acid, reaction with fluorescent dye agents 26853-89-4DP, Poly-D-lysine, reaction with FITC 26913-90-6DP, Poly-D-lysine, reaction with FITC 108157-58-0DP, reaction with fluorescent dye agents, conjugates
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in vivo method of measuring kidney or liver function with fluorescent dye clearance)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Diagnostikforschung Inst; DE 4445065 A 1996 CAPLUS
(2) Souli, S; PROCEEDINGS OF THE SPIE 1995, V2627, P109
(3) Univ Washington Mallinckrodt Medical Inc; WO 9840106 A 1998 CAPLUS
(4) Urata; CAPLUS
(5) Urata; YAKURI TO CHIRYO 1992, V20(SUPPL 10), PS2551

L6 ANSWER 35 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:388912 CAPLUS <<LOGINID::20060727>>
DN 133:50994
ED Entered STN: 13 Jun 2000
TI ***Metal*** coordination compounds, NIR absorbers and plasma display panel filters
IN Osawa, Tetsuo; Shimizu, Kanji
PA Mitsubishi Chemical Industries Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C07F001-08
ICS C09K003-00; G02B001-10; G02B005-22
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 29, 74

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000159776	A2	20000613	JP 1998-337354	19981127

PRAI JP 1998-337354 19981127

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2000159776	ICM	C07F001-08

ICS C09K003-00; G02B001-10; G02B005-22
IPCI C07F0001-08 [ICM,7]; C09K0003-00 [ICS,7]; G02B0001-10 [ICS,7]; G02B0005-22 [ICS,7]
IPCR C07F0001-00 [I,C*]; C07F0001-08 [I,A]; C09K0003-00 [I,A]; C09K0003-00 [I,C*]; G02B0001-10 [I,A]; G02B0001-10 [I,C*]; G02B0005-22 [I,A]; G02B0005-22 [I,C*]
OS MARPAT 133:50994
GI

/ Structure 24 in file .gra /

AB The ***complex*** compds. comprise ***metals*** (Cu, Co, Zn, Ni) and a ***squarylium*** deriv. I [R1, R1' = H, (substituted) alkylamino, (substituted) dialkylamino, (substituted) cycloalkylamino; (substituted) alkoxy; X, X' = group contg. active H; A, B = arom. carbon ring, arom. heterocyclic ring; k, k' = 1-4].
ST ***metal*** coordination ***squarylium*** NIR absorber plasma filter
IT Coordination compounds
RL: PRP (Properties)
(Cu, Co, Zn, Ni; ***metal*** coordination compds., NIR absorbers and plasma display panel filters)
IT ***Optical*** filters
Plasma display panels
(***metal*** coordination compds., NIR absorbers and plasma display panel filters)
IT Polyesters, properties
Polyvinyl butyrals
RL: PRP (Properties)
(***metal*** coordination compds., NIR absorbers and plasma display panel filters)
IT IR spectra
(near-IR; ***metal*** coordination compds., NIR absorbers and plasma display panel filters)
IT 9011-14-7, PMMA 25038-59-9, Polyethyleneterephthalate, properties
203674-47-9 206141-46-0 274926-11-3 274926-12-4 274926-13-5
274926-14-6 274926-15-7 274926-16-8 274926-17-9 274926-18-0
274926-19-1 274926-20-4
RL: PRP (Properties)
(***metal*** coordination compds., NIR absorbers and plasma display panel filters)

L6 ANSWER 36 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:1833 CAPLUS <<LOGINID::20060727>>
DN 132:134255
ED Entered STN: 03 Jan 2000
TI Determination of protein-dye association by near infrared fluorescence-detected circular dichroism
AU Meadows, Frederick; Narayanan, Nara; Patonay, Gabor
CS Department of Chemistry, Georgia State University, Atlanta, GA, 30303, USA
SO Talanta (2000), 50(6), 1149-1155
CODEN: TLNTA2; ISSN: 0039-9140
PB Elsevier Science B.V.
DT Journal
LA English
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 6
AB Near-IR (NIR) ***squarylium*** dye spectral properties were evaluated by absorption, fluorescence, CD (CD), and fluorescence-detected CD (FDCD). Substituents of the two NN dyes differed at R1 and R2, located sym. on the chromophore. The side chains of NN525 are R1 = hexanoic acid, R2 = Bu sulfonate and R1 = R2 = Et for NN127. FDCD signals were first confirmed by denaturing BSA with 2-8 M urea showing a diminution of dye FDCD peaks, but no change occurred in spectral properties of the dyes in urea. This indicated that the obsd. cotton effects occurred by noncovalent interactions with the secondary structure of the protein. The av. BSA-dye assocn. consts. found by fluorescence, absorbance, and FDCD were

1.27.times.106 (n = 1) and 3.3.times.106 M-1 (n = 1) for NN127 and NN525 resp. These values were in good agreement when calcd. by the three spectroscopic methods validating the use of NIRFDCD for ***optical*** parameter calcns. These results are useful to describe NIR ***squarylium*** dye labeling of BSA.

ST protein dye assocn near IR fluorescence detected CD

IT Proteins, specific or class
RL: PRP (Properties)
(***complexes*** ; detn. of protein-dye assocn. by near IR fluorescence-detected CD)

IT Cotton effect
Formation constant
Molecular association
(detn. of protein-dye assocn. by near IR fluorescence-detected CD)

IT Circular dichroism spectroscopy
(fluorescence detected, FDCD; detn. of protein-dye assocn. by near IR fluorescence-detected CD)

IT Secondary structure
(protein; detn. of protein-dye assocn. by near IR fluorescence-detected CD)

IT Albumins, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(serum; detn. of protein-dye assocn. by near IR fluorescence-detected CD)

IT 138496-68-1, NN 127 256924-69-3, NN 525
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(detn. of protein-dye assocn. by near IR fluorescence-detected CD)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L6 ANSWER 37 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:558366 CAPLUS <<LOGINID::20060727>>

DN 131:278799

ED Entered STN: 02 Sep 1999

TI Charge distortion by sparkles can explain strong SHG by centrosymmetric ***squaraine*** dyes

AU Honeybourne, Colin L.

CS Department of Chemical and Physical Sciences, UWE, Bristol, BS16 1QY, UK

SO Journal of Materials Chemistry (1999), 9(9), 2241-2244
CODEN: JMACEP; ISSN: 0959-9428

PB Royal Society of Chemistry

DT Journal

LA English

CC 73-10 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

AB G.J. Ashwell et ***al*** . (1995) published a report describing 2nd harmonic generation (SHG) from a ***laser*** beam (Nd:YAG, 1.064 .mu.m) by a Langmuir-Blodgett (LB) monolayer of a sym. substituted diaryl ***squaraine*** dye. The mol. geometry of the ***squaraine*** , its unit cell is centrosym. in the cryst. state. Interfacial effects (arising from the twin-step function in the refractive index) cannot account for the magnitude of the obsd. SHG. Presumably mol. centrosymmetry was retained in the LB film, with the obsd. SHG being attributed to the presence of noncentrosym. ensembles of these centrosym. mols. An electronically distorted (and therefore noncentrosym.) ***squaraine***

mol. can exhibit large SHG coeffs., these distortions being induced by the proximity of the highly polar species that constitute the mol. environment. In the model of a T-shaped dimer, both monomer components become noncentrosym., the mutual interaction between the 2 monomers being modeled by using a neg. or a pos. sparkle. The noteworthy SHG output from LB films of A.'s centrosym. ***squaraines*** is attributed to intramol. charge transfer within the distorted monomers in the T-dimer.

ST charge distortion sparkle harmonic generation centrosym ***squaraine*** dye

IT Second-harmonic generation
(charge distortion by sparkles can explain centrosym. ***squaraine*** dye strong)

IT Dyes
(charge distortion by sparkles can explain strong second-harmonic generation by centrosym. ***squaraine***)

IT Langmuir-Blodgett films
(charge distortion by sparkles can explain strong second-harmonic generation by centrosym. ***squaraine*** dyes in)

IT Electron transfer
(charge distortion by sparkles can explain strong second-harmonic generation by centrosym. ***squaraine*** dyes in relation to)

IT 43134-09-4, Cyclobutenediylium, 1,3-bis(4-(dimethylamino)phenyl)-2,4-dihydroxy-, bis(inner salt) 84688-00-6, Cyclobutenediylium, 1,3-bis(4-aminophenyl)-2,4-dihydroxy-, bis(inner salt)
RL: PRP (Properties)
(charge distortion by sparkles can explain strong second-harmonic generation by)

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L6 ANSWER 38 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:485948 CAPLUS <<LOGINID::20060727>>
DN 131:215648
ED Entered STN: 06 Aug 1999

TI Novel fluorescent chemosensor for Li+ based on a ***squarylium*** dye carrying a monoazacrown moiety

AU Kim, Sung-Hoon; Han, Sun-Kyung; Park, Sang-Hyun; Yoon, Cheol-Min; Keum, Sam-Rok
CS Department of Dyeing and Finishing, College of Engineering, Kyungpook National University, Taegu, 702- 701, S. Korea

SO Dyes and Pigments (1999), 43(1), 21-25
CODEN: DYPIDX; ISSN: 0143-7208
PB Elsevier Science Ltd.
DT Journal
LA English

CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 73, 79
AB A ***squarylium*** dye carrying a monoazacrown moiety has been synthesized and characterized. The dye demonstrates sensitivity to Li+ ***complexation*** with spectroscopic changes in fluorescence. ***Complex*** formation of the dye with Cu2+ was also investigated by UV-visible spectrometry.
ST ***squarylium*** azacrown dye prepn; fluorescent sensor lithium detection; copper ***complexation*** ***squaraine*** crown ether dye
IT Fluorescent dyes
Fluorescent dyes
(cyanine; prepn. of azacrown ***squarylium*** dye fluorescent sensor for lithium)
IT Cyanine dyes
Cyanine dyes
Optical sensors
Optrodes
(fluorescent; prepn. of azacrown ***squarylium*** dye fluorescent sensor for lithium)
IT Azacrown ethers
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); TEM (Technical or engineered material use); ANST (Analytical study); PREP (Preparation); USES (Uses)
(prepn. of azacrown ***squarylium*** dye fluorescent sensor for lithium)
IT 243658-04-0P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); TEM (Technical or engineered material use); ANST (Analytical study); PREP (Preparation); USES (Uses)
(dye; prepn. of azacrown ***squarylium*** dye fluorescent sensor for lithium)
IT 7440-50-8, Copper, properties
RL: PRP (Properties)
(effect on azacrown ***squarylium*** dye absorption intensity)
IT 7439-93-2, Lithium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(prepn. of azacrown ***squarylium*** dye fluorescent sensor for)
IT 2892-51-5 243645-85-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; prepn. of azacrown ***squarylium*** dye fluorescent sensor for lithium)
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L6 ANSWER 39 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:423165 CAPLUS <<LOGINID::20060727>>
DN 131:177236
ED Entered STN: 09 Jul 1999
TI Characteristics of photogeneration of charge carriers in films of amorphous molecular semiconductors doped with a ***squarylium*** dye

AU Davidenko, N. A.; Ishchenko, A. A.; Pavlov, V. A.
CS Kiev. Gos. Univ. im. T.G.Shevchenko, Kiev, Ukraine
SO Zhurnal Nauchnoi i Prikladnoi Fotografii (1999), 44(2), 52-56
CODEN: ZNPFEK; ISSN: 0869-6144
PB Nauka
DT Journal
LA Russian
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
GI

/ Structure 25 in file .gra /

AB ***Optical*** and electrophotophys. properties of poly(N-epoxypropylcarbazole) (P) films doped with a ***squarylium*** dye (I) were studied and compared with the data for the films doped with a structurally similar cationic cyanine dye (II) . The studied samples included quartz support-(P+dopant) structure and a sandwich ***Al*** -(P+dopant)-SnO2 structure. ***Optical*** absorption and luminescence were studied as functions of the dopant concn. in the range 10-3 - 5 wt.%. Increases were obsd. of luminescence quenching by external elec. field and of quantum yields of free charge carriers with increase of concn. of I in the films. Increase of photocond. is explained as a result of ***squarylium*** dye aggregation.

ST charge carrier photogeneration epoxypropylcarbazole polymer semiconductor ***squarylium*** dye dopant; electrophotog holog charge carrier photogeneration polyepoxypropylcarbazole ***squarylium*** dye dopant

IT Electric current carriers
(photocarriers, photo-; photogeneration of charge carriers in amorphous semiconductors doped with ***squarylium*** dye)

IT Luminescence
Luminescence quenching
Molecular association
Optical absorption
Photoconductivity
Photocurrent
(photogeneration of charge carriers in amorphous semiconductors doped with ***squarylium*** dye)

IT Polyoxyalkylenes, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(photogeneration of charge carriers in amorphous semiconductors doped with ***squarylium*** dye)

IT Electrophotographic photoconductors (photoreceptors)
Holographic recording materials
(photogeneration of charge carriers in amorphous semiconductors doped with ***squarylium*** dye in relation to)

IT 14238-53-0 38575-74-5
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(photogeneration of charge carriers in amorphous semiconductors doped with ***squarylium*** dye)

IT 55774-96-4, Poly(N-epoxypropylcarbazole) 106440-27-1, Poly(N-epoxypropylcarbazole),sru
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(photogeneration of charge carriers in amorphous semiconductors doped with ***squarylium*** dye)

L6 ANSWER 40 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:202919 CAPLUS <<LOGINID::20060727>>
DN 130:305693
ED Entered STN: 01 Apr 1999
TI Use of ***squarylium*** dyes as a sensing molecule in ***optical*** sensors for the detection of ***metal*** ions
AU Kim, Sung Hoon; Han, Sun Kyung; Park, Sang Hyun; Lee, Sang Min; Lee, Su Mi; Koh, Kwang Nak; Kang, Shin Won
CS Department of Dyeing and Finishing, Kyungpook National University, Taegu, 702-701, S. Korea

SO Dyes and Pigments (1999), 41(3), 221-226
CODEN: DYPIDX; ISSN: 0143-7208
PB Elsevier Science Ltd.
DT Journal
LA English
CC 79-3 (Inorganic Analytical Chemistry)
Section cross-reference(s): 41
AB The ***complex*** formation of ***squarylium*** (SQ) and dithiosquarylium (DTSQ) dyes with Cu2+ and Ag+ was studied spectrophotometrically. Their absorption spectra showed cation selective spectral intensity changes in the presence of specific ***metal*** ions in CH2Cl2-CH3CN due to cation ***complexing*** . Highly selective ion sensing film optodes for the detn. of two kinds of ions, Cu2+ and Ag+, were prepd. with plasticized PVC-PVAc-PVA membranes contg. the SQ or DTSQ dye.
ST ***squarylium*** dye sensing mol ***optical*** sensor ***metal*** ion
IT Absorption spectra
(absorption spectra of ***metal*** ***squarylium*** dye ***complexes***)
IT Ionophores
(chromoionophores; ***metal*** ions detn. by film optodes based on ***squarylium*** dyes)
IT ***Complexation***
(***complex*** formation of ***squarylium*** and dithiosquarylium dyes with Cu2+ and Ag+)
IT Dyes
Optrodes
(***metal*** ions detn. by film optodes based on ***squarylium*** dyes)
IT ***Metals*** , analysis
RL: ANT (Analyte); ANST (Analytical study)
(***metal*** ions detn. by film optodes based on ***squarylium*** dyes)
IT 7440-22-4, Silver, analysis 7440-50-8, Copper, analysis
RL: ANT (Analyte); ANST (Analytical study)
(***metal*** ions detn. by film optodes based on ***squarylium*** dyes)
IT 68842-68-2 203269-10-7
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(***metal*** ions detn. by film optodes based on ***squarylium*** dyes)
IT 117-81-7, DOP 25086-48-0, Vinyl acetate-vinyl alcohol-vinyl chloride copolymer 79060-88-1, Sodium tetrakis[3,5-bis(trifluoromethyl)phenyl]borate
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(***metal*** ions detn. by film optodes based on ***squarylium*** dyes)
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L6 ANSWER 41 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:67214 CAPLUS <<LOGINID::20060727>>
DN 130:229909
ED Entered STN: 02 Feb 1999
TI Photoinduced energy transfer and charge transfer of ***squarylium*** cyanine dyes
AU Zhao, Wei; Zhang, Bao-Wen; Hou, Yuan-Jun; Cao, Yi
CS Photochemistry Laboratory, Institute of Photographic Chemistry, Chinese Academy of Sciences, Beijing, 100101, Peop. Rep. China
SO Chinese Journal of Chemistry (1998), 16(6), 499-508
CODEN: CJOCEV; ISSN: 1001-604X
PB Science Press
DT Journal
LA English
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
AB A series of ***squarylium*** cyanine dyes (Sqs) were synthesized to explore their applications in functional devices. Preliminary investigation on the mechanism involved in these devices was carried out. Spectroscopic behavior of Sqs with porphyrin (P), 8-hydroxyquinolium aluminum (Alq) and ruthenium bipyridyl ***complex*** (Ru(bipy)) in soln., in film and on nanocryst. TiO2 was investigated, resp. A mechanism including photoinduced energy transfer and charge transfer processes was suggested in the corresponding practical devices. By means of doping, a red org. electroluminescent device (ELD) using Sq-doped Alq as the emission layer (EML) has been developed, and the total light to electricity efficiency of nanocryst. TiO2 electrode based on using Sq-doped Ru(bipy) as photosensitizer has been improved greatly in the whole visible region, particularly in the red area above 600 nm.
ST photoinduced energy charge transfer ***squarylium*** cyanine dye; electroluminescent photoelec device dopant ***squarylium*** dye photophys
IT Electroluminescent devices
Fluorescence quenching
Luminescence, electroluminescence
Photocurrent
Photoinduced electron transfer
Photoinduced energy transfer
(photoinduced energy-transfer and charge-transfer of ***squarylium*** cyanine dyes for application in electroluminescent- and photoelec. devices)
IT Luminescence
Optical absorption
(photophys. properties of ***squarylium*** cyanine dyes for application in electroluminescent- and photoelec. devices)
IT 13463-67-7, Titania, uses
RL: DEV (Device component use); USES (Uses)
(electrode; photoinduced energy-transfer and charge-transfer of ***squarylium*** cyanine dyes for application in electroluminescent- and photoelec. devices)
IT 2085-33-8
RL: DEV (Device component use); USES (Uses)
(emission layer; photoinduced energy-transfer and charge-transfer of ***squarylium*** cyanine dyes for application in electroluminescent- and photoelec. devices)
IT 65181-78-4
RL: DEV (Device component use); USES (Uses)
(hole transport layer; photoinduced energy-transfer and charge-transfer of ***squarylium*** cyanine dyes for application in electroluminescent- and photoelec. devices)
IT 141460-19-7
RL: DEV (Device component use); USES (Uses)
(photoelectrode sensitizer; photoinduced energy-transfer and charge-transfer of ***squarylium*** cyanine dyes for application in electroluminescent- and photoelec. devices)
IT 12243-46-8 72936-99-3 185704-26-1
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(photoinduced energy-transfer and charge-transfer of ***squarylium***

cyanine dyes for application in electroluminescent- and photoelec. devices)

IT 57715-42-1
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(photophys. properties and interactions with porphyrin of ***squarylium*** cyanine dyes for application in electroluminescent- and photoelec. devices)

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L6 ANSWER 42 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1998:568345 CAPLUS <<LOGINID::20060727>>
DN 130:8622
ED Entered STN: 07 Sep 1998
TI A comment upon the second-order non-linear ***optical*** properties of 2,4-bis(N-octadecylpyrrol-2-yl) ***squaraine***

AU Ashwell, G. J.; Jefferies, G.; Green, A.; Skjonnemand, K.; Rees, N. D.; Bahra, G. S.; Brown, C. R.
CS Centre for Molecular Electronics, Cranfield University, Cranfield, MK43 0AL, UK

SO Thin Solid Films (1998), 327-329, 461-464
CODEN: THSFAP; ISSN: 0040-6090
PB Elsevier Science S.A.
DT Journal
LA English

CC 73-10 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 66

AB The title compd., 2,4-bis(N-octadecylpyrrol-2-yl) ***squaraine*** (1a), is centric and shows no discernible 2nd-harmonic generation (SHG) when deposited as a Langmuir-Blodgett (LB) film. This conflicts with the disclosure of 2nd-order activity by Lynch et ***al*** . (D.E. Lynch, U. Geissler, IR Peterson et ***al*** ., J. Chem. Soc. Perkin II (1997) 827) and invalidates the proposed mechanism, the SHG being impurity-induced and influenced by interfacial effects. Their data indicate a mixt. of isomeric forms, the centric 2,4-squarate (1a: UCO = 1625 cm-1) and an acentric 1,2-squarate (1b: UCO = 1750 cm-1) in a ratio of 3:1, whereas the authors' SHG-inactive sample has a single CO band at 1626 cm-1. LB films of the related dye, 2,4-bis(N-octadecyl-3,5-dimethylpyrrol-2-yl) ***squaraine*** (2), exhibit very weak SHG when deposited on glass slides but the signal is suppressed when there is an org. buffer layer between the monolayer and substrate. The nonlinear ***optical*** behavior is not an inherent property of the film and, instead, is attributed to the polarization of the chromophore by the underlying substrate. The thickness and dielec. permittivities of the LB monolayer of dye 2, derived from an anal. of the surface plasmon resonance

(SPR), are l = 27 A, .epsilon.r = 3.4 and .epsilon.i=0.39, resp.
ST second order nonlinear ***optical*** property ***squaraine*** ; octadecylpyrrolyl ***squaraine*** Langmuir Blodgett film
IT Dielectric constant
Isomerization
Isomers
Langmuir-Blodgett films
Nonlinear ***optical*** properties
Surface pressure
(a comment upon second-order non-linear ***optical*** properties of 2,4-bis(N-octadecylpyrrol-2-yl) ***squaraine***)
IT Surface plasmon
(resonance; a comment upon second-order non-linear ***optical*** properties of 2,4-bis(N-octadecylpyrrol-2-yl) ***squaraine***)
IT 189892-80-6P, 1,2-Bis(N-octadecylpyrrol-2-yl) ***squaraine***
204464-09-5P, 2,4-Bis(N-octadecyl-3,5-dimethylpyrrol-2-yl) ***squaraine*** 204464-10-8P, 2,4-Bis(N-octadecylpyrrol-2-yl) ***squaraine***
RL: PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); PROC (Process)
(a comment upon second-order non-linear ***optical*** properties of 2,4-bis(N-octadecylpyrrol-2-yl) ***squaraine***)
IT 2892-51-5, Squaric acid 89601-24-1, N-Octadecylpyrrole 189892-86-2, N-Octadecyl-2,4-dimethylpyrrole
RL: RCT (Reactant); RACT (Reactant or reagent)
(a comment upon second-order non-linear ***optical*** properties of 2,4-bis(N-octadecylpyrrol-2-yl) ***squaraine***)
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L6 ANSWER 43 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1998:351795 CAPLUS <<LOGINID::20060727>>
DN 129:38409
ED Entered STN: 10 Jun 1998
TI ***Optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation)

IN Turner, Jonathan; Dyrks, Thomas; Semmler, Wolfhard; Licha, Kai; Riefke, Bjorn
PA Institut fur Diagnostikforschung G.m.b.H. an der Freien Universitat Berlin, Germany; Turner, Jonathan; Dyrks, Thomas; Semmler, Wolfhard; Licha, Kai; Riefke, Bjorn

SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM A61K049-00
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 63
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9822146	A2	19980528	WO 1997-DE2559	19971029
WO 9822146	A3	19981015		
W: AU, CA, CN, HU, JP, KR, NO, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19649971	A1	19980528	DE 1996-19649971	19961119

	CA 2272320	AA	19980528	CA 1997-2272320	19971029
	AU 9872985	A1	19980610	AU 1998-72985	19971029
	EP 942756	A2	19990922	EP 1997-948710	19971029
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	CN 1237911	A	19991208	CN 1997-199895	19971029
	JP 2001506591	T2	20010522	JP 1998-523059	19971029
	US 6329531	B1	20011211	US 1999-308177	19991118
PRAI	DE 1996-19649971	A	19961119		
	WO 1997-DE2559	W	19971029		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9822146	ICM	A61K049-00
	IPCI	A61K0049-00 [ICM,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]; C07H0015-00 [I,C*]; C07H0015-26 [I,A]; C08B0037-00 [I,A]; C08B0037-00 [I,C*]; C09B0023-00 [I,C*]; C09B0023-08 [I,A]; C09B0056-00 [I,C*]; C09B0056-16 [I,A]; G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-68 [I,A]; G01N0033-68 [I,C*]
	ECLA	A61K049/00P4F; C09B056/16; G01N033/52; G01N033/68V2; C07H015/26; C08B037/00P2G; C09B023/08D
DE 19649971	IPCI	C09B0023-02 [ICM,6]; C09B0023-00 [ICM,6,C*]; C09B0069-10 [ICS,6]; C09B0069-00 [ICS,6,C*]; C09B0056-16 [ICS,6]; C09B0056-00 [ICS,6,C*]; C08B0037-00 [ICS,6]; G01N0021-64 [ICS,6]; G01N0033-48 [ICS,6]; G01N0033-53 [ICS,6]; C07H0013-08 [ICS,6]; C07H0013-00 [ICS,6,C*]; C07K0016-00 [ICS,6]; A61K0049-00 [ICS,6]; C08B0037-10 [ICA,6]; C12Q0001-00 [ICA,6]; C07D0209-22 [ICA,6]; C07D0209-00 [ICA,6,C*]; C07D0207-404 [ICA,6]; C07D0207-00 [ICA,6,C*]; C07D0403-06 [ICA,6]; C07D0403-00 [ICA,6,C*]; C07D0413-06 [ICA,6]; C07D0413-00 [ICA,6,C*]; C07D0417-06 [ICA,6]; C07D0417-00 [ICA,6,C*]; C07D0215-06 [ICA,6]; C07D0215-00 [ICA,6,C*]; C07D0231-20 [ICA,6]; C07D0231-00 [ICA,6,C*]; C07D0235-20 [ICA,6]; C07D0235-00 [ICA,6,C*]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]; C07H0015-00 [I,C*]; C07H0015-26 [I,A]; C08B0037-00 [I,A]; C08B0037-00 [I,C*]; C09B0023-00 [I,C*]; C09B0023-08 [I,A]; C09B0056-00 [I,C*]; C09B0056-16 [I,A]; G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-68 [I,A]; G01N0033-68 [I,C*]
	ECLA	A61K049/00P4F; C07H015/26; C08B037/00P2G; C09B023/08D; C09B056/16; G01N033/52; G01N033/68V2
CA 2272320	IPCI	A61K0049-00 [ICM,6]; G01N0033-533 [ICS,6]; G01N0033-58 [ICS,6]
AU 9872985	IPCI	A61K0049-00 [ICM,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]; C07H0015-00 [I,C*]; C07H0015-26 [I,A]; C08B0037-00 [I,A]; C08B0037-00 [I,C*]; C09B0023-00 [I,C*]; C09B0023-08 [I,A]; C09B0056-00 [I,C*]; C09B0056-16 [I,A]; G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-68 [I,A]; G01N0033-68 [I,C*]
EP 942756	IPCI	A61K0049-00 [ICM,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]; C07H0015-00 [I,C*]; C07H0015-26 [I,A]; C08B0037-00 [I,A]; C08B0037-00 [I,C*]; C09B0023-00 [I,C*]; C09B0023-08 [I,A]; C09B0056-00 [I,C*]; C09B0056-16 [I,A]; G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-68 [I,A]; G01N0033-68 [I,C*]
CN 1237911	IPCI	A61K0049-00 [ICM,6]; G01N0033-58 [ICS,6]; G01N0033-533 [ICS,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]; C07H0015-00 [I,C*]; C07H0015-26 [I,A]; C08B0037-00 [I,A]; C08B0037-00 [I,C*]; C09B0023-00 [I,C*]; C09B0023-08 [I,A]; C09B0056-00 [I,C*]; C09B0056-16 [I,A]; G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-68 [I,A]; G01N0033-68 [I,C*]
JP 2001506591	IPCI	C07D0209-14 [ICM,7]; C07D0209-00 [ICM,7,C*]; A61K0049-00 [ICS,7]; C07D0231-22 [ICS,7]; C07D0231-00

[ICS,7,C*]; C07D0277-60 [ICS,7]; C07D0277-64 [ICS,7]; C07D0277-00 [ICS,7,C*]; C07H0005-06 [ICS,7]; C07H0005-00 [ICS,7,C*]; C07K0014-00 [ICS,7]; C07K0016-00 [ICS,7]; C08B0037-00 [ICS,7]; C09B0056-16 [ICS,7]; C09B0056-00 [ICS,7,C*]

US 6329531 IPCI G01N0033-51 [ICM,7]; G01N0035-533 [ICS,7]; A61K0049-00 [ICS,7]; C09B0057-04 [ICS,7]; C09B0057-00 [ICS,7,C*]; C09B0056-16 [ICS,7]; C09B0056-00 [ICS,7,C*]

IPCR A61K0049-00 [I,A]; A61K0049-00 [I,C*]; C07H0015-00 [I,C*]; C07H0015-26 [I,A]; C08B0037-00 [I,A]; C08B0037-00 [I,C*]; C09B0023-00 [I,C*]; C09B0023-08 [I,A]; C09B0056-00 [I,C*]; C09B0056-16 [I,A]; G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-68 [I,A]; G01N0033-68 [I,C*]

NCL 548/455.000; 424/009.340; 424/009.600; 534/747.000; 534/822.000; 536/026.600; 536/029.110; 536/029.130; 548/362.500; 548/364.700

ECLA A61K049/00P4F; C07H015/26; C08B037/00P2G; C09B023/08D; C09B056/16; G01N033/52; G01N033/68V2

OS MARPAT 129:38409

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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention concerns compds. Fm(-A1) (-Bn) (-WO) (I) wherein F is a dye label mol. with an absorption max. 600-1200 nm; A is a .beta.-amyloid plaque binding biomol.; B is a .beta.-amyloid plaque binding dye; and W is a .beta.-amyloid plaque binding hydrophilic low-mol. structural element. The nos. in the formula are m = 1,2 or if n and o = 0 than m = 3-20; l and n are independently 0,1,2; o = 0,1,2,3,4 if l+n+o .gtoreq. 0. Part F in I is a cyano, ***squarilium*** , croconium, merocyano or oxonol dye with the structures II, III, IV and V (R1-R4 and R7-R10 are H, F, Cl, Br, I, nitro or -COOE1, -COOE1E2, -NHCOE1, -NHCONHE1, -NE1E2,- OE1, -OSO3OE1, -SO3OE1, -SO2NHE, -E1; E1 and E2 are independently H, satd., unsatd., linear, branched C1-C50 alkyl; the chain can include C5 or C6 arom. or cyclic condensed rings, 0-15 O atoms, 0-3 carbonyl groups or 0-5 hydroxy groups; R1-R4 and/or R7-R10 can be coupled via a six member arom. ring or they can be coupled to A, B or W; R5 and R6 are -E1, C1-C4 sulfoalkyl, alkylene, cycloalkylene chains; R11 and R12 are Ph rings with 1-3 substituents of hydroxy, carboxy, sulfate, sulfonate, alkyl, alkoxy, or carboxylic acid). The .beta.-amyloid plaque binding biomol. A in I is one of the following: antibody, antibody fragment, specific peptide, protein, receptor, enzyme, enzyme substrate, nucleotide, RNA, DNA, lipoprotein, carbohydrate, saccharide, saccharide deriv., or dextran. The .beta.-amyloid plaque binding dye B in I is a diazo-biphenyl compd. The structural element W in I is from the group of the following: -OSO3H, -SO3H, linear, branched, satd., unsatd., cyclic, polycyclic alkyl, alkenyl, polyalkenyl, alkynyl, aryl, alkylaryl or arylalkyl up to 60 carbon atoms, with substituents hydroxy, carboxy, sulfate, sulfonate. Coupling of part F with A, B and/or W can be via ester, ether, sec., tert., amino group, amido, ureylene, thiol, etc. groups. The invention also includes the physiol. compatible salts of the above compds. These compds. are used as contrast agents for in vivo and in vitro diagnosis of neurodegenerative diseases such as Alzheimer's disease in combination with near infra-red radiation (NIR radiation) and detection of the fluorescent or transmitted light. Further the invention concerns a test kit, consisting of at least one of the I compds., the carrier, e.g. nitrocellulose membrane, reagents and solvents. Diagnostic agents contg. said components are also disclosed.

ST contrast agent fluorescence NIR neurodegenerative disease; Alzheimer disease beta amyloid plaque diagnosis

IT Imaging agents
(contrast; ***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))

IT Nervous system
(degeneration; ***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))

IT IR radiation
(near-IR; ***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))
IT Alzheimer's disease
Cyanine dyes
Diagnosis
Fluorescent probes
Imaging agents
Membrane filters
Test kits
(***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))
IT Antibodies
Carbohydrates, biological studies
DNA
Enzymes, biological studies
Lipoproteins
Nucleotides, biological studies
Peptides, biological studies
Proteins, general, biological studies
RNA
Receptors
RL: ARG (Analytical reagent use); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))
IT Amyloid
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-; ***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))
IT 9004-54-0, Dextran, biological studies
RL: ARG (Analytical reagent use); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))
IT 75-50-3D, Trimethylamine, ***complex*** with sulfur dioxide
121-44-8, reactions 499-14-9, Chondrosin 538-75-0,
N,N'-Dicyclohexylcarbodiimide 1066-33-7, Ammonium hydrogencarbonate
1109-28-0, Maltotriose 6066-82-6, N-Hydroxysuccinimide 7446-09-5D,
Sulfur dioxide, ***complex*** with trimethylamine, reactions
103192-52-5 125700-67-6 208243-29-2 208243-31-6 208243-39-4
208266-35-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))
IT 93777-14-1P 178822-77-0P 208243-29-2DP, reaction products with heparin
208243-32-7P 208243-33-8P 208243-34-9P 208243-35-0P 208243-36-1P
208243-37-2P 208243-38-3P 208243-40-7P 208266-36-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))

L6 ANSWER 44 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1998:349627 CAPLUS <<LOGINID::20060727>>
DN 129:128399
ED Entered STN: 10 Jun 1998
TI Vacuum-deposited dye films and their ***optical*** properties
AU Gritsenko, Konstantin P.; Slominsky, Yuri L.; Fedotov, Konstantin V.
CS Metal-Polymer Research Institute of Belarus Academy of Sciences, Gomel, 246652, Belarus
SO Proceedings of SPIE-The International Society for Optical Engineering (1998), 3359(Optical Diagnosis of Materials and Devices for Opto-, Micro-, and Quantum Electronics 1997), 479-483
CODEN: PSISDG; ISSN: 0277-786X
PB SPIE-The International Society for Optical Engineering
DT Journal

LA English
CC 73-4 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 36, 41, 74
AB Evapd. ***squarylium*** -based (Sq), malonitrile-based merocyanine (Mc), ***metal*** - ***complexes*** on dithiolate base (Dt), ketocyanine (Kc) and phthalocyanine (Pc) dyes form smooth films, which show high ***optical*** absorption and reflection in visible and near-IR regions. Co-deposition of polytetrafluoroethylene (PTFE) and Pc dyes showed that the films obtained consist of the PTFE matrix filled by Pc particles of 10-30 nm size. Recording on dye film was performed in ablative mode by 9 mW of semiconductor ***laser*** , if PTFE sublayer was used. Three types of ***laser*** -induced hole opening mechanisms (flow motion, ***laser*** ablation, sublimation) were obtained by choosing dye and substrate with properties needed.
ST dye film vacuum deposition ***optical*** property; phthalocyanine fluoro ethylene polymer film
IT UV and visible spectra
(absorption and reflection spectra of vacuum-deposited dye films)
IT Thiols (organic), properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(dithiols, ***metal*** ***complexes*** ; ***optical*** properties of vacuum-deposited dye films)
IT Cyanine dyes
(keto and malonitrile-based mero;; ***optical*** properties of vacuum-deposited dye films)
IT ***Optical*** recording
(***laser*** -induced holes on phthalocyanine dye films)
IT IR spectra
(near-IR; absorption and reflection spectra of vacuum-deposited dye films)
IT Annealing
(***optical*** properties of phthalocyanine dye films after)
IT Fluoropolymers, properties
RL: PRP (Properties)
(***optical*** properties of phthalocyanine dye films co-deposited with polytetrafluoroethylene)
IT ***Laser*** radiation
(***optical*** recording on phthalocyanine dye films)
IT Transition ***metal*** ***complexes***
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(phthalocyanine; ***optical*** properties of dye films co-deposited with polytetrafluoroethylene)
IT Metallophthalocyanines
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(transition ***metal*** ***complexes*** ; ***optical*** properties of dye films co-deposited with polytetrafluoroethylene)
IT 3317-67-7, Cobalt phthalocyanine 13930-88-6 14320-04-8, Zinc phthalocyanine
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(***optical*** properties of dye films co-deposited with polytetrafluoroethylene)
IT 574-93-6, Phthalocyanine 9002-84-0, Polytetrafluoroethylene
RL: PRP (Properties)
(***optical*** properties of phthalocyanine dye films co-deposited with polytetrafluoroethylene)
IT 7440-02-0D, Nickel, dithiolate ***complexes*** , properties 157207-74-4D, derivs.
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(***optical*** properties of vacuum-deposited dye films)
IT 103123-21-3 210344-60-8
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(vacuum deposition rate of films vs. temp.)
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L6 ANSWER 45 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:680639 CAPLUS <<LOGINID::20060727>>
DN 127:365420
ED Entered STN: 27 Oct 1997
TI ***Squaraine*** -based long wavelength fluorescent chemosensors for ions
AU Akkaya, Engin U.
CS Department of Chemistry, Middle East Technical University, Ankara, 06531, Turk.
SO NATO ASI Series, Series C: Mathematical and Physical Sciences (1997), 492(Chemosensors of Ion and Molecule Recognition), 177-188
CODEN: NSCSDW; ISSN: 0258-2023
PB Kluwer
DT Journal; General Review
LA English
CC 79-0 (Inorganic Analytical Chemistry)
Section cross-reference(s): 25
AB A review with 17 refs. Fluorescent chemosensors which can be excited at the red-end of the visible spectrum offer a no. of advantages. ***Squaraines*** when modified appropriately, yield such chemosensors signaling various ions in acetonitrile and water.
ST ***squaraine*** deriv fluorescent ion sensor review; long wavelength fluorescent ion sensor review; alk earth effect ***squaraine*** sensor review; calcium detection ***squaraine*** fluorescent sensor review
IT ***Optical*** sensors
(fluorescent; ***squaraine*** -based long wavelength fluorescent chemosensors for ions)
IT Alkaline earth ***metals***
RL: PRP (Properties)
(ions; effect on fluorescence of ***squaraine*** derivs.)
IT Fluorescence
(of ***squaraine*** derivs.)
IT 7440-70-2, Calcium, analysis
RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(cationic; ***squaraine*** -based long wavelength fluorescent chemosensors for detection of)
IT 123756-48-9P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and fluorescence of water-sol.)
IT 198434-19-4P
RL: ARU (Analytical role, unclassified); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(***squaraine*** -based long wavelength fluorescent chemosensors for alk. earth ions)
IT 198434-20-7P
RL: ARU (Analytical role, unclassified); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(***squaraine*** -based long wavelength fluorescent chemosensors for calcium ion)
IT 78675-98-6DP, ***Squaraine*** , derivs.
RL: ARU (Analytical role, unclassified); DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(***squaraine*** -based long wavelength fluorescent chemosensors for ions)
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L6 ANSWER 46 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:602510 CAPLUS <<LOGINID::20060727>>
DN 127:301317
ED Entered STN: 22 Sep 1997
TI Heat development photosensitive material with improved lightfastness
IN Harada, Toru; Fujiwara, Itsuo
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03C001-498
ICS G03C001-00; G03C001-22
CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09230531	A2	19970905	JP 1996-60376	19960223
PRAI JP 1996-60376		19960223		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 09230531	ICM	G03C001-498
	ICS	G03C001-00; G03C001-22
	IPCI	G03C0001-498 [ICM,6]; G03C0001-00 [ICS,6]; G03C0001-22 [ICS,6]

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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title material contains a dye I (Z1, Z2 = nonmetal atoms required to form a 5 or 6- membered N-contg. heterocycle which may be condensed; R1, R2 = alkyl, alkenyl, aralkyl; L = linking group composed of 5, 7 or 9 methine groups linked by conjugated double bonds; a, b, c = 0 or 1; X = anion, when X is an anion contg. M in III shown below, the compd. III, IV or V is not necessary) or II (R3-10 = H, alkyl, cycloalkyl, aryl, aralkyl, R3 and R4, R5 and R6, R7 and R8, R9 and R10, R4 and R5 or R8 and R9 may form a 5 or 6-membered ring), and .gtoreq.1 compd. selected from Ln1Mm1 (III; L = ***ligand*** ; M = Ni, Co, Cu, Pt, Pd, Fe, Mn, or Zn; n1 = 1-10; m1 = 1 or 2), IV (R11-14 = H or alkyl; X = anion), and V [R15 = H, halo, CONHR22, SO2NHR22, NHSO2R22, NHCOR22, NHCONHR22 (R22 = alkyl or aryl); R16, R17 = H, alkyl, halo, NHCOR22, NHSO2R22, nonmetal atoms which link each other to form an arom. ring; R18, R19 = H, alkyl, alkoxy, OH, halo; R20, R21 = alkyl, aralkyl, atoms linking to form a heterocycle; n2 = 0-2]. The material may be used in IR ***laser*** exposure. The dyes, which remains after heat-development, shows good lightfastness, and the material gives clear images with high sharpness. Thus, a PET film was coated with an antihalation layer contg. the dye and the decoloration-preventing agent on the back side, and coated with a photosensitive emulsion layer and a protective layer successively on the

front side to give a heat development photosensitive film.
ST photothermog copying IR absorbing cyanine dye; ***squarylium*** dye heat developable photosensitive material; decoloration preventing agent photothermog copying
IT Photothermographic copying
(heat-developable photosensitive material contg. cyanine or ***squarylium*** IR-absorbing dye and decoloration-preventing agent)
IT 161375-44-6 197087-00-6 197087-01-7 197087-02-8
RL: DEV (Device component use); USES (Uses)
(heat-developable photosensitive material contg. cyanine or ***squarylium*** IR-absorbing dye and decoloration-preventing agent)
IT 15186-37-5 15551-24-3 102279-09-4 111364-54-6 111532-88-8 197087-03-9
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(heat-developable photosensitive material contg. cyanine or ***squarylium*** IR-absorbing dye and decoloration-preventing agent)
IT 183745-24-6P
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(heat-developable photosensitive material contg. cyanine or ***squarylium*** IR-absorbing dye and decoloration-preventing agent)
IT 177168-18-2 183744-99-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of cyanine dye)

L6 ANSWER 47 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:347040 CAPLUS <<LOGINID::20060727>>
DN 126:309193
ED Entered STN: 03 Jun 1997
TI Theoretical Aspects of Differential Reflectance and Electroreflectance Spectroscopy in the UV-Vis Region As Applied to the Study of Molecular Layers Adsorbed on ***Metal*** Surfaces
AU Kim, Sunghyun; Wang, Zhenghao; Scherson, Daniel A.
CS Department of Chemistry, Konkuk University, Seoul, 143-701, S. Korea
SO Journal of Physical Chemistry B (1997), 101(14), 2735-2740
CODEN: JPCBFK; ISSN: 1089-5647
PB American Chemical Society
DT Journal
LA English
CC 66-4 (Surface Chemistry and Colloids)
Section cross-reference(s): 68, 73
AB Differential reflectance UV-vis spectra (.DELTA.R/R vs wavelength, .lambda.) of mol. layers adsorbed on various ***metal*** surfaces have been simulated using Fresnel equations for a stratified three-phase model for the interface, assuming each constituent retains its bulk ***optical*** properties after the interface is formed, i.e. total neglect of adsorbate-substrate interactions. Results obtained for ultrathin films (1 nm) of ***squarylium*** , meso-tetrakis(Ph porphyrin), and ***metal*** -free phthalocyanine in contact with Au, Pt, and the basal plane of highly oriented pyrolytic graphite have shown that the shape of .DELTA.R/R vs .lambda. for p-polarized light depends quite markedly on the angle of incidence and the ***optical*** consts. of the substrate. At normal incidence, the reflectance spectra displayed peaks similar to those obsd. in the conventional absorption spectra of the materials. As the angle was increased, however, the position of these features not only shifted, but, in certain cases, new bands emerged, which could not be readily ascribed to the overlayer. This indicates that under non-normal incidence conditions, no conclusions regarding the phys. state of adsorbed monolayers on ***metal*** substrates can be drawn on the basis of a cursory examn. of .DELTA.R/R vs .lambda. curves in this spectral region. These purely ***optical*** effects may also account for features obsd. in the electroreflectance spectra of monolayers irreversibly adsorbed on electrode surfaces, in which case the reflectivity of the substrate is modified by its state of charge.
ST electroreflectance spectroscopy adsorbed mol layer ***metal*** ; ***metal*** surface adsorbed mol layer reflectance; ***optical*** property incidence angle differential reflectance
IT Electrolytes
Interface
(electroreflectance study at a three-phase ***optical*** model of an electrode/adsorbate/electrolyte interface)

IT Adsorbed substances
Electrooptical reflection
(***optical*** response of adsorbate/substrate interfacial systems as a function of incidence angle)
IT 574-93-6, Phthalocyanine 917-23-7 68149-27-9
RL: PRP (Properties)
(adsorbed mol. layer; ***optical*** response of adsorbate/substrate interfacial systems as a function of incidence angle)
IT 7440-06-4, Platinum, properties 7440-57-5, Gold, properties 7782-42-5, Graphite, properties
RL: PRP (Properties)
(***optical*** response of adsorbate/substrate interfacial systems as a function of incidence angle)
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L6 ANSWER 48 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:680783 CAPLUS <<LOGINID::20060727>>
DN 126:52258
ED Entered STN: 18 Nov 1996
TI Attenuated total reflection properties and structures in ***squarylium*** LB films

AU Kaneko, Futao; Honda, Syosaku; Fukami, Tetsuo; Kato, Keizo; Wakamatsu, Takashi; Shinbo, Kazunari; Kobayashi, Satoshi
CS Department of Electrical and Electronic Engineering, Niigata University, Ikarashi 2-8050, Niigata, 950-21, Japan

SO Thin Solid Films (1996), 284-285, 417-419
CODEN: THSFAP; ISSN: 0040-6090
PB Elsevier
DT Journal
LA English

CC 73-2 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 66, 76

AB The attenuated total reflection (ATR) properties, as a function of the incident angle of the ***laser*** beam, were studied for ***squarylium*** (SQ) Langmuir-Blodgett (LB) films on thin Ag layers. Photosensitive SQ dyes exhibit strong absorption in the visible. The ATR curves are strongly dependent on the no. of LB monolayers; the resonant

angles at the dips increase with increasing no. of monolayers. The ***complex*** dielec. consts. of the LB films (uniaxial anisotropic dielecs.) were detd. by fitting the theor. ATR curves to the exptl. curves. The ATR properties suggest that the tilt angles of the long axes of the chromophores in the SQ mols. are .apprx.10.degree. from the LB film plane for two layers and .apprx.30.degree. for more than four layers. Since H aggregation of SQ mols. in LB films is generated on annealing and the absorption spectra change, the ATR properties were also studied for annealed SQ LB films. The properties are of interest for ***optical*** applications.

ST attenuated total reflection ***squarylium*** LB film; Langmuir Blodgett film dielec const

IT Dielectric constant
(attenuated total reflection and dielec. properties and structures in ***squarylium*** LB films with silver layer)

IT ATR (attenuated total reflection)
Agglomeration
Langmuir-Blodgett films
(attenuated total reflection properties and structures in ***squarylium*** LB films with silver layer)

IT Annealing
(attenuated total reflection properties and structures in ***squarylium*** LB films with silver layer affected by annealing)

IT 7440-22-4, Silver, uses
RL: NUU (Other use, unclassified); USES (Uses)
(attenuated total reflection properties and structures in ***squarylium*** LB films with silver layer)

IT 106802-96-4
RL: PRP (Properties)
(attenuated total reflection properties and structures in ***squarylium*** LB films with silver layer)

L6 ANSWER 49 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:695627 CAPLUS <<LOGINID::20060727>>

DN 123:182654

ED Entered STN: 22 Jul 1995

TI Third harmonic spectral dispersion of ***squaraines***

AU Andrews, James H.; Khaydarov, John D. V.; Singer, Kenneth D.; Hull, Diana L.; Chuang, Kathy C.

CS Dep. Phys., Case Western Res. Univ., Cleveland, OH, 44106-7079, USA

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1994), 35(2), 112-13
CODEN: ACPPAY; ISSN: 0032-3934

PB American Chemical Society, Division of Polymer Chemistry

DT Journal

LA English

CC 73-10 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

AB The authors work is intended to test the strength, location, and purity of the lowest-lying two-photon transition by fitting the measured dispersion of .gamma. in the vicinity of the 21Ag two-photon resonance to a sum-over-states model with a min. no. of levels consistent with the linear absorption spectrum of the dye. The authors use third harmonic generation to probe the sign and magnitude of the near-resonant contribution found in the D121 denominator at .omega.02 = 2.omega. because it does not require detection of the output signal at a highly absorbed frequency. The authors have measured the third- harmonic response of the ***squaraine*** dyes, ISQ and C16-TSQ, shown with their absorption spectra in chloroform. The authors measurements were made over a range of fundamental frequencies (.omega. = 1.15-1.16 .mu.m) for which the third harmonic is energetically above the exceptionally strong, yet relatively narrow, absorption peak in each dye's linear absorption spectra (at 654 nm for ISQ and 668 nm for C16-TSQ), but generally below the UV absorption band which begins for each dye around 400 nm. With both dyes, the authors find that the 21Ag state appears just above the 11Bu state in energy and has a transition moment from the first excited state that is moderately smaller than that between the ground and 11Bu state. The location and width of the 21Ag state varies little in any of the authors fits, regardless of the strength of .mu.01 or the parameters of the high-lying two-photon states. The uncertainty in .mu.01 is almost entirely detd. by the uncertainty in .mu.01. The 21Ag transition moments detd. by the authors exptl. fits are almost an order of magnitude larger than that

predicted by Q. L. Zhou et ***al*** . (1993) for a similar ***squaraine*** dye (.mu.12 = -0.34 Debye) using quantum chem. calcns. Those calcns. predict large two-photon transition moments (.apprx.10 Debye) only for high-lying two-photon states (the 31A9, 41Ag, or 51Ag states in the UV). The authors find that the 21Ag state plays a significant role in detg. the shape of the nonlinear dispersion for third harmonic generation throughout this wavelength region. The authors measurements confirm the predictions of Pierce and Zhou that high-lying two photon states must be included in modeling for these materials. With respect to both ISQ and C16-TSQ, the authors find at least one high-lying two-photon state is required to fit the data. The parameters of the higher-lying two-photon states are not well detd. by the fits to the data. However, it is seen that all reasonable fits to high-lying two-photon states merely contribute a relatively const. imaginary part to .gamma. in the spectral region of the authors measurements. While the authors measurements precisely characterize the 21Ag state, further measurements are needed to characterize the higher-lying two-photon states.

ST third harmonic spectra dispersion ***squaraine*** dye

IT Dyes
(***squaraine*** ; third harmonic spectral dispersion of ***squaraines***)

IT Ultraviolet and visible spectra
(third harmonic spectral dispersion of ***squaraines***)

IT ***Optical*** nonlinear property
(third-harmonic generation, third harmonic spectral dispersion of ***squaraines***)

IT 68842-68-2 123778-84-7
RL: PRP (Properties)
(third harmonic spectral dispersion of ***squaraines***)

L6 ANSWER 50 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:232587 CAPLUS <<LOGINID::20060727>>
DN 122:199935
ED Entered STN: 08 Dec 1994
TI ***Squaraine*** chemistry: effects of solvent and temperature on the fluorescence emission of ***squaraines***
AU Law, Kock-Yee
CS Xerox Webster Research Center, 800 Phillips Road, 0114-39D, Webster, NY, 14580, USA
SO Journal of Photochemistry and Photobiology, A: Chemistry (1994), 84(2), 123-32
CODEN: JPPCEJ; ISSN: 1010-6030
PB Elsevier
DT Journal
LA English
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 74

AB The ***squaraines*** - a class of donor-acceptor mol. exhibit intense multiple fluorescence in the visible region. The three emission bands, designated .alpha., .beta. and .gamma. in the order of decreasing energy, were found to be emissions from the excited state of ***squaraine*** , the excited state of the solute-solvent ***complex*** and a relaxed, twisted excited state resp. The effects of the solvent and temp. on the absorption and fluorescence emission of bis(4-dibutylaminophenyl) ***squaraine*** are reported. The data confirm that ***squaraine*** forms solute-solvent ***complexes*** in solvents. Evidence is provided that the solute-solvent interaction is short range, and that polar solvents usually exert a bathochromic effect on the absorption max. wavelength .lambda.max. Along with the bathochromic shift, a gradual change in the compn. of the emission band, from being dominated by the .alpha. emission in ether to being dominated by the .beta. emission in polar solvents, is obsd. Both .lambda.max and Keq (the equil. const. for ***complexation***) are shown to correlate well with the solvent parameter .pi.*. The results indicate that the solute-solvent ***complexation*** process is responsible for the bathochromic shift in .lambda.max and the compn. change in the emission spectra. This conclusion is supported by variable and low temp. spectral data. While the lifetime of excited 1 is shown to be independent of the solvent (2.3.+-.0.1 ns), the lifetimes of the excited solute-solvent ***complex*** and the relaxed, twisted excited state are solvent sensitive, varying from 0.6 to 3.5 ns and 0.7 to 2.9 ns resp. From the

fluorescence lifetime and the radiative decay rate, the rate of the radiationless decay, which involves rotation of the C-C bond between the Ph ring and the four-membered ring of ***squaraine*** , can be calcd. The rotation rate is shown to increase rapidly as the twisting of the ***squaraine*** chromophore increases. The intensity of the .gamma. emission can be inhibited not only by lowering the temp. but also by a rigid polymer matrix at room temp. The results support the postulation that a twisting motion is required for the generation of the relaxed excited state.

ST solvent temp effect fluorescence ***squaraine*** photophys

IT Fluorescence
Optical absorption
Solvent effect
(effects of solvent and temp. and solute-solvent ***complexation*** on fluorescence emission of ***squaraines***)

IT 99663-97-5, Bis(4-dibutylaminophenyl) ***squaraine***
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(effects of solvent and temp. on the fluorescence emission of ***squaraines***)

IT 60-29-7, Diethyl ether, properties 64-17-5, Ethanol, properties 67-63-0, 2-Propanol, properties 67-64-1, Acetone, properties 67-66-3, Chloroform, properties 68-12-2, DMF, properties 71-23-8, 1-Propanol, properties 71-36-3, 1-Butanol, properties 71-41-0, 1-Pentanol, properties 71-43-2, Benzene, properties 71-55-6, 1,1,1-Trichloroethane 75-05-8, Acetonitrile, properties 75-09-2, Methylene chloride, properties 75-85-4, tert-Pentanol 78-93-3, Methyl ethyl ketone, properties 79-00-5, 1,1,2-Trichloroethane 106-42-3, p-Xylene, properties 107-06-2, 1,2-Dichloroethane, properties 108-88-3, Toluene, properties 109-99-9, Tetrahydrofuran, properties 111-27-3, 1-Hexanol, properties 111-70-6, 1-Heptanol 123-51-3, Isopentanol 123-86-4, Butyl acetate 123-91-1, 1,4-Dioxane, properties 141-78-6, Ethyl acetate, properties 584-02-1, 3-Pentanol 6032-29-7, 2-Pentanol 9003-53-6, Polystyrene
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(solvent effect of; effects of solvent and temp. and solute-solvent ***complexation*** on fluorescence emission of ***squaraines***)

L6 ANSWER 51 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:544727 CAPLUS <<LOGINID::20060727>>
DN 121:144727
ED Entered STN: 17 Sep 1994
TI Negative third order ***optical*** susceptibilities of ***squaraines***
AU Shi, R. F.; Zhou, Q. L.; Garito, A. F.
CS Dep. Phys., Univ. Pennsylvania, Philadelphia, PA, 19104, USA
SO Materials Research Society Symposium Proceedings (1994), 328(Electrical, Optical, and Magnetic Properties of Organic Solid State Materials), 643-8
CODEN: MRSPDH; ISSN: 0272-9172
DT Journal
LA English
CC 73-10 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 22
AB Quantum many-electron calcns. based on multiple-excited CI were implemented on ***squaraine*** mols. Certain ***squaraines*** possess neg. 3rd order ***optical*** susceptibilities (.gamma.) even in the zero frequency limit. The calcns. agree with the exptl. results obtained by C.W. Dirk et ***al*** . (1992) for anilinium ***squarylium*** in terms of the sign and magnitude. High-lying 2-photon states in ***squaraines*** are always critically important. The sign of .gamma. depends on the electron donating ability of the 2 side groups in ***squaraines*** .

ST ***squaraine*** third order nonlinear ***optical***

IT Quantum chemistry
(CI, of ***squaraines*** , third order nonlinear susceptibilities in relation to)

IT ***Optical*** nonlinear property
(susceptibility, third-order, neg., of ***squaraines***)

IT 157207-74-4
RL: USES (Uses)

(. third order ***optical*** nonlinear susceptibilities of)
IT 63842-83-1 84688-00-6
RL: USES (Uses)
(neg. third order ***optical*** nonlinear susceptibilities of)

L6 ANSWER 52 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:681974 CAPLUS <<LOGINID::20060727>>
DN 119:281974
ED Entered STN: 25 Dec 1993
TI Photochemistry of ***squaraine*** dyes. 5. Aggregation of bis(2,4-dihydroxyphenyl) ***squaraine*** and bis(2,4,6-trihydroxyphenyl) ***squaraine*** and their photodissociation in acetonitrile solutions
AU Das, Suresh; Thanulingam, T. Lekshmana; Thomas, K. George; Kamat, Prashant V.; George, M. V.
CS Reg. Res. Lab., CSIR, Trivandrum, 695 019, India
SO Journal of Physical Chemistry (1993), 97(51), 13620-4
CODEN: JPCHAX; ISSN: 0022-3654
DT Journal
LA English
CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41
AB The equil. consts. and thermodn. parameters for aggregate formation of bis(2,4-dihydroxyphenyl)- ***squaraine*** and bis(2,4,6-trihydroxyphenyl) ***squaraine*** have been studied by absorption spectroscopy. The values of the equil. const., K, for the dimerization of SQ1 and SQ2 in acetonitrile at 300 K are (3.1 .+-. 0.3) .times. 105 M-1 and (2.19 .+-. 0.14) .times. 105 M-1, resp. Iodine enhances the aggregation process. This has been attributed to the formation of charge-transfer ***complexes*** between iodine and the dyes and the stronger tendency of these ***complexes*** to form aggregates. Excitation of the ***squaraine*** dimer with a 532-nm ***laser*** pulse leads to the formation of the excited singlet state of monomeric dye as the excited dimer dissocs. within the ***laser*** pulse duration of 18 ps.
ST photochem ***squaraine*** dye aggregation photodissocn acetonitrile; dimerization ***squaraine*** dye charge transfer ***complex***
IT Photochemistry
(of ***squaraine*** dyes, aggregation in)
IT Dimerization
Molecular association
Charge-transfer ***complexes***
Dimers
RL: USES (Uses)
(of ***squaraine*** dyes, photochem. of)
IT Ultraviolet and visible spectra
(of ***squaraine*** dyes, photochem. of, aggregation in)
IT Dyes
(***squaraine*** , photochem. of, aggregation in)
IT Photolysis
(flash, picosecond, of ***squaraine*** dyes, aggregation in)
IT 3588-89-4 19205-48-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(photochem. of, aggregation in)

L6 ANSWER 53 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:72474 CAPLUS <<LOGINID::20060727>>
DN 116:72474
ED Entered STN: 21 Feb 1992
TI ***Optical*** recording media
IN Santo, Takeshi; Mihara, Chieko; Sugata, Hiroyuki
PA Canon K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B41M005-26
ICS G11B007-24
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

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     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   JP 03126581          A2    19910529    JP 1989-266966         19891012
     JP 3015053           B2    20000228
PRAI JP 1989-266966               19891012
CLASS
 PATENT NO.      CLASS  PATENT FAMILY CLASSIFICATION CODES
 -------------   -----  ----------------------------------------------
 JP 03126581     ICM    B41M005-26
                 ICS    G11B007-24
                 IPCI   B41M0005-26 [ICM,5]; G11B0007-24 [ICS,5]
GI


/ Structure 26 in file .gra /


AB   The title   ***laser***     ***optical***   media with improved heat and
     light resistance and long-term storability contain   ***squarylium***
     dyes I and/or croconium dyes II (A+ = org. cation group; B = org. group)
     and a carboxylic acid   ***metal***     ***complex***  .
ST     ***laser***   recording medium   ***squarylium***   croconium dye;
       ***metal***   carboxylate   ***laser***   recording medium
IT   Carboxylic acids, compounds
     RL: USES (Uses)
        (aryl, salts,   ***laser***     ***optical***   recording media contg.
        dyes and, light- and heat-resistant, storable)
IT   Recording materials
        (  ***optical***  ,   ***squarylium***   and croconium dyes and
          ***metal***   carboxylates for, light- and heat-resistant, storable)
IT   43134-05-0   72939-79-8   88513-97-7   88878-49-3   90550-62-2
     93072-17-4   127476-15-7   138496-68-1   138496-69-2   138521-69-4
     138590-52-0
     RL: USES (Uses)
        (  ***laser***     ***optical***   recording media, contg.
          ***metal***   carboxylates, light- and heat-resistant, storable)
IT   2880-85-5   6228-53-1   16283-36-6   42494-53-1   105636-59-7
     122012-47-9   131840-56-7   138496-24-9   138496-25-0   138590-53-1
     138590-54-2
     RL: USES (Uses)
        (  ***squarylium***   and croconium dye-based   ***optical***
        recording media contg., light- and heat-resistant, storable)

L6   ANSWER 54 OF 63  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   1991:594192  CAPLUS <<LOGINID::20060727>>
DN   115:194192
ED   Entered STN:  01 Nov 1991
TI   Electrophotographic photoconductors
IN   Akao, Yuji; Fujimori, Mizue; Ozawa, Yoshiyuki; Yamada, Yorinobu
PA   Citizen Watch Co., Ltd., Japan
SO   Jpn. Kokai Tokkyo Koho, 5 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
IC   ICM  G03G005-06
     ICS  C09B023-00; C09B047-04; G03G005-06
CC   74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
     Reprographic Processes)
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   JP 03078759          A2    19910403    JP 1989-215332         19890822
PRAI JP 1989-215332               19890822
CLASS
 PATENT NO.      CLASS  PATENT FAMILY CLASSIFICATION CODES
 -------------   -----  ----------------------------------------------
 JP 03078759     ICM    G03G005-06
                 ICS    C09B023-00; C09B047-04; G03G005-06
                 IPCI   G03G0005-06 [ICM,5]; C09B0023-00 [ICS,5]; C09B0047-04
                        [ICS,5]; G03G0005-06 [ICS,5]
OS   MARPAT 115:194192
GI
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/ Structure 27 in file .gra /

AB Charge carrier-generating layer of the photoconductors contain ***squarylium*** compds. I [R1-2 = C1-10 (branched) alkyl] and Cu phthalocyanine II. This combination provides much increased sensitivity, esp. in wavelength region of semiconductor ***laser*** . Thus, a photoconductor having an ***Al*** substrate, a charge carrier-generating layer contg. equimol. mixt. of I (R1-2 = Me) and II and polyester, and a charge carrier-transporting layer contg. p-diethylaminobenzaldehyde diphenylhydrazone and polycarbonate showed sensitivity (lux-s required for half decay of voltage) 0.35, 0.45 and 0.63, at 850 nm, 800 nm, and 750 nm, resp.
ST ***squarylium*** compd phthalocyanine electrophotog photoconductor
IT Electrophotographic photoconductors
(charge-generating agents for, ***squarylium*** compds. and phthalocyanine as, for high sensitivity to semiconductor ***laser***)
IT 43134-09-4
RL: USES (Uses)
(charge-generating layer of electrophotog. photoconductor contg. copper phthalocyanine and)
IT 147-14-8
RL: USES (Uses)
(charge-generating layer of electrophotog. photoconductor contg. ***squarylium*** compd. and)

L6 ANSWER 55 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:418366 CAPLUS <<LOGINID::20060727>>
DN 115:18366
ED Entered STN: 12 Jul 1991
TI ***Laser*** printer application [of infrared-absorbing dyes]
AU Kakuta, Atsushi
CS Res. Lab., Hitachi Ltd., Hitachi, 319-12, Japan
SO Infrared Absorbing Dyes (1990), 155-71. Editor(s): Matsuoka, Masaru. Publisher: Plenum, New York, N. Y.
CODEN: 57DDA2
DT Conference; General Review
LA English
CC 74-0 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
AB The present status of development and utilization of org. pigment materials for diode- ***laser*** printers was surveyed. The materials can be divided into : phthalocyanines, azo pigments, ***squaraine*** pigments, perylene pigments, aggregated pigments, and others. The phthalocyanines are the oldest and still the most widely applied in photoreceptors. They are of 2 types: conventional ***metal*** -free or bivalent ***metal*** phthalocyanines transformed to a special crystal structure and tri- or tetravalent ***metal*** phthalocyanines having intrinsic near-IR absorptions. The polyazo pigments are popular coloring agents and are com. used as visible-sensitive photoreceptors for copiers. To apply them to diode ***lasers*** , bond conjugation in the mol. structures must be expanded and special trisazo pigments have to be designed and synthesized. These pigments are also applied in printers. ***Squaraine*** pigments are newcomers and have no counterpart among practical coloring agents. They also show quite strong absorbance in the near-IR region and are being marketed. Perylene pigments are conventional coloring agents; however, because of their mol. structures, it is still hard to achieve a sufficiently strong near-IR absorption. The aggregated type introduces a novel aspect of org. photoreceptors. This type is available for copiers or LED printers, but it needs to be modified for diode- ***laser*** use. Other types of pigments are also being actively developed and their application in printers tested. These include pyrrolopyrrole types or azulenium types. 59 Refs.
ST review electrophotog photoconductor IR absorbing dye; ***laser*** printer photoreceptor IR dye review
IT Electrophotographic photoconductors
(IR absorbing dyes in diode- ***laser*** printers in relation to)

IT Dyes
(IR-absorbing, as photoreceptors in diode ***laser*** printers)
IT Electrophotography
(app., IR absorbing dyes in diode- ***laser*** printers in relation to)

L6 ANSWER 56 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:104352 CAPLUS <<LOGINID::20060727>>
DN 114:104352
ED Entered STN: 23 Mar 1991
TI The role of excited singlet molecular oxygen in the photodegradation of functional ***squarylium*** dyes
AU Kuramoto, Nobuhiro
CS Osaka Prefect. Ind. Technol. Res. Inst., Osaka, 550, Japan
SO Journal of the Society of Dyers and Colourists (1990), 106(5-6), 181-6
CODEN: JSDCAA; ISSN: 0037-9859
DT Journal
LA English
CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
AB Stern-Volmer anal. and competitive photo-oxidn. expts. of some ***squarylium*** dyes with Ni bis(dithiobenzil), an efficient single O quencher, were carried out in CHCl3 soln. and cellulose acetate film in order to study the photodegrdn. mechanism of the dyes for ***optical*** data storage systems. From both sets of expts. the photodegrdn. reactions of ***squarylium*** dyes involved oxidn. by singlet O in a self-sensitized process, and singlet O quenchers such as Ni dithiolato ***complexes*** had an inhibiting effect on the photoreaction of the dyes. The relative rate consts. for the reaction with singlet O from the competitive photo-oxidn. expts. were detd. The use of singlet O quenchers was effective for improving the light fastness of thin layers of ***squarylium*** dyes on polycarbonate substrates.
ST ***squarylium*** dye photodegrdn mechanism; singlet oxygen photodegrdn ***squarylium*** dye; nickel dithiolate singlet oxygen quencher
IT Polycarbonates, uses and miscellaneous
RL: USES (Uses)
(films, ***squarylium*** dyes in, photodegrdn. of, role of excited singlet mol. oxygen in)
IT Photolysis
(of ***squarylium*** dyes, role of excited singlet mol. oxygen in)
IT Dyes
(***squarylium*** compds., photodegrdn. of, role of excited singlet mol. oxygen in)
IT Fading
(photochem., of ***squarylium*** dyes, role of singlet mol. oxygen in)
IT 9004-35-7, Cellulose acetate
RL: USES (Uses)
(films, ***squarylium*** dyes in, photodegrdn. of, role of excited singlet mol. oxygen in)
IT 43134-05-0 63842-82-0 68842-66-0 98987-53-2 123132-73-0 132365-72-1 132458-73-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(photodegrdn. of, role of excited singlet mol. oxygen in)
IT 28984-20-5 100597-01-1
RL: USES (Uses)
(singlet oxygen quencher, photodegrdn. of ***squarylium*** dyes in presence of)
IT 7782-44-7, Oxygen, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(singlet, in photodegrdn. of ***squarylium*** dyes)

L6 ANSWER 57 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1990:189145 CAPLUS <<LOGINID::20060727>>
DN 112:189145
ED Entered STN: 12 May 1990
TI ***Optical*** recording medium comprising alkyl-substituted ***squarylium*** dye
IN Arakawa, Seiichi; Tomimuro, Hiroshi
PA Sony Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
IC ICM B41M005-26
ICS G11B007-24
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 01178494	A2	19890714	JP 1988-2019	19880108
PRAI JP 1988-2019		19880108		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 01178494	ICM	B41M005-26
	ICS	G11B007-24
	IPCI	B41M0005-26 [ICM,4]; G11B0007-24 [ICS,4]

OS MARPAT 112:189145
GI

/ Structure 28 in file .gra /

AB The ***optical*** recording medium has a recording layer contg. a ***squarylium*** dye deriv. of the structure I (R, R1 = alkyl; R2 = H, alkyl). The dye has the desirable soly. in org. solvents for prepg. a coating soln. and the dye layer is superior in ***optical*** properties, such as absorption coeffs. and surface reflectance. Thus, a CHCl3 soln. of the ***squarylium*** dye I (R = Et; R1 = Me2CHCH2; R2 = Me2CH) was spin-coated on a glass plate to form a recording layer, which gave a max. reflectance of 30% at a thickness of ca. 65 nm. Recording and reading out of ***information*** were carried out with a 60 nm-thick recording layer by irradiating a 780 nm beam from a semiconductor pulsed ***laser*** operated at a recording power of 10 mW and a scanning rate of 5 m/s to give a carrier-to-noise ratio in rerecording of 46-50 dB relative to a pulse frequency of 1-4 MHz. Variation of the alkyl substituents on the framework of I indicated exptl. that introduction of a bulky substituent (esp. for R1) gave a higher coeff. of absorption. Lightfastness of the dye examd. also depended on the kind of the substituents and tended to be lowered by use of a bulky substituent. The fastness was however shown to be largely improved by adding to the dye layer a singlet oxygen quencher, such as a Ni ***complex*** deriv.

ST ***optical*** recording layer heat mode; ***squarylium*** dye alkyl deriv recording; quinaldine intermediate synthesis ***squarylium*** dye; singlet oxygen quencher nickel ***complex***

IT Recording materials
(***optical*** , alkyl-substituted ***squarylium*** dyes for, with good lightfastness)

IT 43134-04-9 126492-64-6 126492-65-7 126492-66-8 126492-67-9 126492-68-0 126492-69-1
RL: USES (Uses)
(***optical*** recording material contg. film of)

IT 75403-25-7P 126572-50-7P 126572-51-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, ***squarylium*** dye from, for ***optical*** recording material)

IT 126492-76-0P
RL: PREP (Preparation)
(prepn. of, for ***optical*** recording material)

IT 79-31-2 769-92-6, p-tert-Butylaniline 2892-51-5, Squaric acid 4170-30-3, Crotonaldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, ***squarylium*** dye from, for ***optical*** recording material)

L6 ANSWER 58 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1989:31505 CAPLUS <<LOGINID::20060727>>
DN 110:31505

ED Entered STN: 21 Jan 1989
TI Organic thin films and their preparations
IN Fu, Ryujun; Kin, Ishi; Furuki, Makoto; Sato, Yoko
PA Fuji Xerox Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
    CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-06
    ICS B41M005-26; H01L031-08
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
    Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63151957	A2	19880624	JP 1986-297551	19861216
	JP 08022618	B4	19960306		
PRAI	JP 1986-297551		19861216		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 63151957	ICM	G03G005-06
	ICS	B41M005-26; H01L031-08
	IPCI	G03G0005-06 [ICM,4]; B41M0005-26 [ICS,4]; H01L0031-08 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]; H01L0051-05 [N,C*]; H01L0051-30 [N,A]
	ECLA	G03G005/06B4B; G03G005/06B7

OS MARPAT 110:31505
GI

/ Structure 29 in file .gra /

AB The films contain ***squarylium*** dyes I(R1, R2 = alkyl). The films are prepd. by forming an ultra-thin layer contg. I on water surface and contacting a substrate with the formed layer. The films are useful as electrophotog. photoreceptors, ***optical*** recording materials, etc. Thus, a CHCl3 soln. of I(R1 = Me, R2 = Et) was dropped on water surface, CHCl3 was evapd., and an ultra-thin film of I was formed by surface tension control. An ***Al*** cylinder was dipped in water, perpendicular to the formed film, for 20 times to give a charge-generating layer, on a charge-transporting layer to give an electrophotog. photoreceptor. Clear copy images were repeatedly obtained by using the photoreceptor.
ST Langmuir-Blodgett film ***squarylium*** dye; electrophotog photoreceptor ***squarylium*** dye film
IT Electrophotographic photoconductors
      (***squarylium*** dye thin films as, formation of, by Langmuir-Blodgett method)
IT Recording materials
      (***optical*** , ***squarylium*** dye thin films as, formation of, by Langmuir-Blodgett method)
IT 94750-69-3 116450-54-5 118188-91-3 118188-92-4 118188-93-5 118188-94-6 118188-95-7 118188-96-8 118188-97-9 118188-98-0
    RL: USES (Uses)
      (Langmuir-Blodgett film, for electrophotog. photoreceptors and ***optical*** recording materials)

L6 ANSWER 59 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1989:31504 CAPLUS <<LOGINID::20060727>>
DN 110:31504
ED Entered STN: 21 Jan 1989
TI Organic thin films and their preparations
IN Fu, Ryujun; Kin, Ishi; Furuki, Makoto; Sato, Yoko
PA Fuji Xerox Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
    CODEN: JKXXAF
DT Patent

LA Japanese
IC ICM G03G005-06
ICS B41M005-26; H01L031-08
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63151956	A2	19880624	JP 1986-297549	19861216
	JP 08022617	B4	19960306		
PRAI	JP 1986-297549		19861216		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 63151956	ICM	G03G005-06
	ICS	B41M005-26; H01L031-08
	IPCI	G03G0005-06 [ICM,4]; B41M0005-26 [ICS,4]; H01L0031-08 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]; H01L0051-05 [N,C*]; H01L0051-30 [N,A]
	ECLA	G03G005/06B4B; G03G005/06B7

OS MARPAT 110:31504
GI

/ Structure 30 in file .gra /

AB The films contain ***squarylium*** dyes I (R = alkyl). The films are prepd. by forming a monomol. layer contg. I on water surface and contacting a substrate with the formed layer. The films are useful as electrophotog. photoreceptors, ***optical*** recording materials, etc. Thus, a CHCl3 soln. of I(R = Me) was dropped on water surface, CHCl3 was evapd., and an ultra-thin film of I was formed by surface tension control. An ***Al*** cylinder was dipped in water, perpendicular to the formed film, for 20 times to give a charge-generating layer, on a charge-transporting layer to give an electrophotog. photoreceptor. Clear copy images were repeatedly obtained by using the photoreceptor.
ST Langmuir-Blodgett film ***squarylium*** dye; electrophotog photoreceptor ***squarylium*** dye film
IT Electrophotographic photoconductors
(***squarylium*** dye thin films as, formation of, by Langmuir-Blodgett method)
IT Recording materials
(***optical*** , ***squarylium*** dye thin films as, formation of, by Langmuir-Blodgett method)
IT 43134-09-4 82930-30-1 99663-97-5 105810-36-4 118189-00-7 118189-01-8 118189-02-9 118189-03-0
RL: USES (Uses)
(Langmuir-Blodgett film, for electrophotog. photoreceptors and ***optical*** recording materials)

L6 ANSWER 60 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1987:626060 CAPLUS <<LOGINID::20060727>>
DN 107:226060
ED Entered STN: 12 Dec 1987
TI ***Optical*** recording medium
IN Ozawa, Tetsuo; Maeda, Shuichi; Kurose, Yutaka; Iwanami, Junko
PA Mitsubishi Chemical Industries Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B41M005-26
ICS G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62124987	A2	19870606	JP 1985-265016	19851127
PRAI	JP 1985-265016		19851127		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 62124987	ICM	B41M005-26
	ICS	G11B007-24
	IPCI	B41M0005-26 [ICM,4]; G11B0007-24 [ICS,4]
	IPCR	G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-248 [I,A]

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title ***optical*** recording medium a has a recording layer contg. a ***squarylium*** deriv. of the formula I [R1-R7, R11-R17 = H, org. group; and the org. groups may form (un)substituted ring(s)] and a phthalocyanine deriv. of the formula II [A, B = H, org. group which may form (un)substituted ring(s); M = IB, IIB, IIA, IIIB, IIIA, IVB, IVA, VB, VA, VIII ***metal*** or group of atoms contg. the ***metal***]. The recording layer is easily coated. The above medium shows improved storage stability and recording sensitivity.

ST ***optical*** recording ***squarylium*** phthalocyanine; ***laser*** recording medium

IT Recording materials
(***optical*** , contg. phthalocyanine deriv. and ***squarylium*** deriv.)

IT 72939-79-8 105922-37-0 105978-08-3 105978-10-7 105978-13-0
106028-78-8 106028-81-3 106028-90-4 106048-73-1 106048-82-2
106048-85-5 111406-77-0 111406-78-1 111406-79-2 111406-80-5
111406-81-6 111406-82-7
RL: USES (Uses)
(***optical*** recording medium contg. phthalocyanine deriv. and, for improved storage stability)

IT 83218-79-5 106923-77-7 109709-91-3 109738-14-9 109738-16-1
111405-54-0 111405-55-1 111405-56-2 111405-57-3 111405-58-4
111405-60-8 111405-61-9 111405-62-0 111405-63-1 111405-64-2
111523-60-5
RL: USES (Uses)
(***optical*** recording medium contg. ***squarylium*** deriv. and, for improved storage stability)

IT 105978-12-9P 111406-76-9P 111432-19-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and use of, for ***optical*** recording medium)

IT 1317-36-8, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (ethylbromophenoxy)phthalonitrile, ***optical*** recording medium contg. phthalocyanine compd. from)

IT 2892-51-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with butylisopropylazulene, ***optical*** recording material contg. ***squarylium*** compd. from)

IT 99287-83-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dihydroxycyclobutenedione, ***optical*** recording medium contg. ***squarylium*** compd. from)

IT 111430-05-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with lead monoxide, recording medium contg. phthalocyanine compd. from)

L6 ANSWER 61 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1987:224579 CAPLUS <<LOGINID::20060727>>
DN 106:224579
ED Entered STN: 26 Jun 1987
TI Heat-mode ***laser*** recording medium
IN Morinaka, Akira; Yoshida, Takuji; Oikawa, Shigeru
PA Nippon Telegraph and Telephone Public Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent

LA Japanese
IC ICM G11B007-24
ICS B41M005-26; G03C001-72
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 61239444	A2	19861024	JP 1985-80669	19850415
PRAI JP 1985-80669		19850415		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 61239444	ICM	G11B007-24
	ICS	B41M005-26; G03C001-72
	IPCI	G11B0007-24 [ICM,4]; B41M0005-26 [ICS,4]; G03C0001-72 [ICS,4]
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G03C0001-72 [I,A]; G03C0001-72 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]

AB A heat-mode ***laser*** recording medium contains (1) an org. thermochromic system which exhibits a max. coloration state and a lower coloration state resulting from further heating of the max. coloration state (both states being stable at room temp.) and shows a reversible transition between the 2 states upon irradn. with a ***laser*** beam, and (2) a light absorber which is used for raising the temp. rapidly. The above thermochromic material is a mixt. of a leuco dye and a solid org. acid. The above light absorber may be .gtoreq.1 of Te, Bi, In, Se, Ge, V phthalocyanine, ***Al*** phthalocyanine, bis(cis-1,2-ditolylethylene-1,2-dithiolato)nickel, bis(1-chloro-3,4-dithiophenolato)nickel, dimethylaminophenol ***squarylium*** , and diethylaminophenol ***squarylium*** . A glass support was coated with a compn. contg. crystal violet lactone, phenolphthalein, and V phthalocyanine to give a ***laser*** recording disk in which recording and erasing were effected by using a semiconductor ***laser*** .

ST ***optical*** recording thermochromic disk; ***laser*** recording disk; leuco dye thermochromic material recording

IT Thermochromic substances
(leuco dye-color developer acid mixts. as, ***optical*** recording materials from)

IT Recording materials
(***optical*** , heat-mode ***laser*** sensitive, contg. thermochromic materials)

IT 574-93-6D, aluminum ***complexes*** 7429-90-5D, ***complexes*** with phthalocyanine 7440-31-5, Tin, uses and miscellaneous 7440-56-4, Germanium, uses and miscellaneous 7440-69-9, Bismuth, uses and miscellaneous 7440-74-6, Indium, uses and miscellaneous 13494-80-9, Tellurium, uses and miscellaneous 14376-21-7, Vanadium phthalocyanine 43134-09-4 82930-30-1 108231-64-7 108432-53-7
RL: USES (Uses)
(light absorber, for thermochromic ***optical*** recording disks)

IT 77-09-8, Phenolphthalein 1552-42-7, Crystal violet lactone 26628-47-7, RED-DCF 104859-64-5, QZ-1012
RL: USES (Uses)
(thermochromic compns. contg., for ***optical*** recording materials)

IT 125-20-2
RL: USES (Uses)
(thermochromic substances contg., for ***optical*** recording medium)

L6 ANSWER 62 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:43127 CAPLUS <<LOGINID::20060727>>
DN 104:43127
ED Entered STN: 08 Feb 1986
TI ***Squaraine*** compositions and their incorporation into layered photoresponsive devices
IN Kazmaier, Peter M.; Baranyi, Giuseppa; Hsiao, Cheng Ho; Burt, Richard A.
PA Xerox Corp. , USA
SO Eur. Pat. Appl., 37 pp.
CODEN: EPXXDW
DT Patent

LA English
IC ICM C07C091-44
ICS G03G005-06
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 25
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 144195	A2	19850612	EP 1984-308091	19841121
EP 144195	A3	19850717		
EP 144195	B1	19900411		
R: DE, GB				
US 4552822	A	19851112	US 1983-558246	19831205
CA 1229349	A1	19871117	CA 1984-468187	19841120
JP 61010540	A2	19860118	JP 1984-251479	19841128
JP 05002145	B4	19930111		
PRAI US 1983-558246	A	19831205		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 144195	ICM	C07C091-44
	ICS	G03G005-06
	IPCI	C07C0091-44 [ICM,4]; G03G0005-06 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
US 4552822	IPCI	G03G0005-04 [ICM,4]; G03G0005-14 [ICS,4]; C07C0087-50 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
	NCL	430/058.800; 257/040.000; 257/431.000; 430/057.800; 430/073.000; 430/074.000; 430/095.000; 564/307.000
CA 1229349	IPCI	C07C0091-44 [ICM,4]; G03G0005-06 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
JP 61010540	IPCI	C07C0091-42 [ICM,4]; G03G0005-06 [ICS,4]; H01L0031-08 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]

OS MARPAT 104:43127
GI

/ Structure 31 in file .gra /

AB ***Squaraines*** (I; R;R1,R2 = alkyl or aryl) are described for use in the photoconductive layers of layered photoresponsive devices for use in electrophotog. and the like. The devices are responsive to visible light and/or IR radiation needed for ***laser*** printing. Thus, a brush-grained ***Al*** support (150 .mu. thickness) was coated with a layer of 3-aminopropyltrimethoxysilane, cured, coated with a 1.4 .mu. photoconductive layer contg. 30% bis(4-dimethylamino-2-hydroxy-6-methylphenyl) ***squaraine*** in a Vitel PE-200 polyester binder, and then with a 17 .mu. charge carrier-transport layer contg. (4-butoxycarbonyl-9-fluorenyl)malononitrile, N,N'-diphenyl-N,N'-bis(3-methylphenyl)[1,1-biphenyl]-4,4'-diamine, and Makrolon. The resultant device showed sufficient discharge so as to respond to light from about 400 to about 950 nm, indicating both visible and IR phoitosensitivity.

ST ***squaraine*** deriv electrophotog photoreceptor; ***laser*** printer electrophotog ***squaraine*** deriv; charge generation electrophotog ***squaraine*** deriv

IT Photography, electro-, plates
(composite, with photocond. layer contg. ***squaraine*** deriv.)

IT Polyesters, uses and miscellaneous
RL: USES (Uses)
(electrophotog. composite photoreceptor with photocond. layer contg. ***squaraine*** deriv. and)

IT Polycarbonates
RL: USES (Uses)
(electrophotog. composite photoreceptor with ***squaraine*** deriv.-contg. photocond. layer and charge carrier-transport layer contg.)

IT 98523-15-0
RL: USES (Uses)
(electrophotog. composite photoreceptor with photocond. layer contg.)

IT 24938-04-3
RL: USES (Uses)
(electrophotog. composite photoreceptor with photocond. layer contg. ***squaraine*** deriv. and)
IT 24936-68-3, uses and miscellaneous 65181-78-4 93376-18-2
RL: USES (Uses)
(electrophotog. composite photoreceptor with ***squaraine*** deriv.-contg. photocond. layer and charge carrier-transport layer contg.)
IT 50926-11-9
RL: USES (Uses)
(electrophotog. composite photoreceptor with ***squaraine*** deriv.-contg. photocond. layer and layer of)
IT 7429-90-5, properties
RL: PRP (Properties)
(electrophotog. composite photoreceptor with ***squaraine*** deriv.-contg. photoconductive layer and support from)
IT 99684-89-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and electrophotog. applications of)
IT 99740-43-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with squaric acid)
IT 2892-51-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (dialkylamino)methylphenol)
IT 6153-39-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dibutylamine)
IT 111-92-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with orcinol monohydrate)
IT 504-15-4 65220-00-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with squaric acid)

L6 ANSWER 63 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1984:219100 CAPLUS <<LOGINID::20060727>>
DN 100:219100
ED Entered STN: 23 Jun 1984
TI ***Laser*** recording materials
PA Nippon Telegraph and Telephone Public Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC B41M005-26; G03C001-72; G11B007-24; G11C013-04
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58008695	A2	19830118	JP 1981-107896	19810710
JP 03023353	B4	19910328		

PRAI JP 1981-107896 19810710
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 58008695	IC	B41M005-26; G03C001-72; G11B007-24; G11C013-04
	IPCI	B41M0005-26; G03C0001-72; G11B0007-24; G11C0013-04
	IPCR	B41M0005-24 [I,A]; B41M0005-24 [I,C*]

AB ***Laser*** recording materials have a ***metal*** powder-org. compd. mixt. type recording layer which is prepd. by simultaneous deposition of an org. substance and a ***metal*** . Fluorescein, phthalocyanine, Disperse Yellow 51, ***squarylium*** dyes, and poly(p-xylylene) are esp. useful as the org. substance and Te, Bi, and Ag are esp. useful as the ***metal*** . The recording materials may also contain a reflector layer (under the recording layer) and a protective coating. The recording materials have good sensitivity for semiconductor ***lasers*** .
ST ***laser*** recording material; ***metal*** dye mixt recording

material; tellurium ***laser*** recording material
IT Recording materials
(***optical*** , ***laser*** , ***metal*** powder dispersion
in org. matrix as)
IT 147-14-8 2321-07-5 7440-22-4, uses and miscellaneous 7440-69-9, uses
and miscellaneous 13494-80-9, uses and miscellaneous 25722-33-2
61931-40-6
RL: TEM (Technical or engineered material use); USES (Uses)
(***laser*** recording materials contg.)

=> d his

(FILE 'HOME' ENTERED AT 15:41:57 ON 27 JUL 2006)

FILE 'CAPLUS' ENTERED AT 15:42:04 ON 27 JUL 2006
L1 1127 S (SQUARINE OR SQUARAINE OR SQUARILIUM OR SQUARYLIUM)
L2 4302206 S (LIGAND OR CHELAT? OR COMPLEX? OR METAL OR METALLIZED OR ALUM
L3 232 S L1 AND L2
L4 37 S (MIXED OR DIFFERENT OR COMPLEX(3A)SALT) AND L3
L5 73 S (OPTICAL OR LASER OR INFORMATION) AND L3
L6 63 S L5 NOT L4

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	345.78	345.99

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-75.00	-75.00

STN INTERNATIONAL LOGOFF AT 15:46:47 ON 27 JUL 2006